Adobe® Premiere® Pro 2.0

User Guide

Adobe®

Contents

Chapter 1: Getting started with Adobe Premiere Pro 2.0

Installation and registration

To install

1 Close any Adobe® applications that are open.

2 Insert the product disc into your computer's DVD drive.

3 Double-click the disc icon, and then follow the on-screen instructions.

After installing the product for the first time on a computer, you will be prompted to activate your copy of the product. (See "To activate" on page 1.)

For more detailed instructions for installing or uninstalling the product, see the ReadMe file on the product disc.

To activate

Activation is a simple, anonymous process that you must complete within 30 days of installing the product. Activation allows you to continue using the product, and it helps prevent casual copying of the product onto more computers than the license agreement allows. After you have installed the product for the first time on a computer, the Activation dialog box opens, prompting you to activate your copy of the product.

1 If the Activation dialog box is not already open, start the product and choose Help > Activate.

2 Follow the on-screen instructions.

Important: If you want to install the product on a different computer, you must first transfer the activation to that computer. To transfer an activation, choose Help > Transfer Activation.

To learn more about activation, visit the Adobe website at www.adobe.com/activation/main.html.

To register

Register your Adobe product to receive complimentary support on installation and product defects and notifications about product updates.

Registering your product also gives you access to the wealth of tips, tricks, and tutorials in Resource Center and access to Adobe Studio Exchange, an online community where users download and share thousands of free actions, plug-ins, and other content for use with Adobe products.

Note: An active Internet connection is required for registration.

The Registration dialog box may open after activation, prompting you to register your copy of the product.

1 If the Registration dialog box is not already open, start the product and choose Help > Registration.

2 Follow the on-screen instructions.

See also

"Resource Center" on page 6

Adobe Help Center

About Adobe Help Center

Adobe® Help Center is a free, downloadable application that includes three primary features.

Product Help Provides Help for Adobe desktop products installed on your system. (If no Adobe desktop products are installed, topics for them aren't available.) Help topics are updated periodically and can be downloaded through Adobe Help Center preferences. For the products you've installed, Product Help also provides dynamic listings of the top support issues and the most recent support documents published on Adobe.com.

Expert Support Provides information about Adobe Expert Support plans and lets you store details about plans you've purchased. If you have an active support plan, you can also use the Expert Support section to submit web cases—questions sent to Adobe support professionals over the web. To access links in the Expert Support section, you must have an active Internet connection.

More Resources Provides easy access to the extensive resources on Adobe.com, including support pages, user forums, tips and tutorials, and training. You can also use this area to store contact information for friends, colleagues, or support professionals, or even websites you turn to for inspiration or troubleshooting information.

See also

"Using Help" on page 3

"To search Help topics" on page 4

"To navigate Help" on page 4

"To view support documents" on page 3

To check for updates

Adobe periodically provides updates to software and to topics in Adobe Help Center. You can easily obtain these updates through Adobe Help Center. An active Internet connection is required.

1 Click the Preferences button in the top-right corner.

2 In the Preferences dialog box, click Check For Updates. If updates are available, follow the on-screen directions to download and save them.

You can also check for updates from within many Adobe applications by choosing Help > Updates.

To set Adobe Help Center preferences

1 Click the Preferences button in the top-right corner.

2 Set any of the following options, and click OK.

Region Specifies your geographical location. Changing this option may affect which services are available to you.

Language Specifies the language in which Expert Support content is displayed.

Display Renewal Reminders For Expert Support Contracts Displays reminder screens when your Expert Support plan has almost expired. Deselect this option if you'd like to turn off these reminders.

Enable Auto Login For Web Case Submission Allows you to submit support questions over the web. This option is available only if you have an active Expert Support plan.

User Interface Language Specifies the language in which Adobe Help Center interface text is displayed.

Check For Updates Searches for new updates to software and Help topics as they become available from Adobe. This option also lets you specify notification options and choose which applications to update.

Network Administrators Displays options for network administration.

To view support documents

From within Adobe Help Center, you can get up-to-the-minute listings of the top support issues and the most recent documents added to the support knowledgebase. Each time you start Adobe Help Center, it uses RSS (Really Simple Syndication) technology to gather this information from the Adobe website and update the listings dynamically.

1 In Adobe Help Center, click Product Help and select a product from the For menu.

2 Click the Contents tab in the navigation pane, and do either of the following:

• Click Recent Documents to display a summary of the most recent documents for the selected product.

• Click Top Issues to display a summary of the top issues documents for the selected product.

3 To view a document in full on the Adobe website, click its link. (An active Internet connection is required.)

To display More Resources

The More Resources section in Adobe Help Center provides easy access to some of the content and services available from the Adobe website, including support, training, tutorials, and forums.

❖ To display this section, click More Resources.

To add contact information in More Resources

1 Click More Resources, and then click Personal Contacts.

2 Do any of the following:

• To add a contact, click New, type the contact information you want to save, and click OK.

• To edit a contact, click a contact in the list, click Edit, make changes to the information, and click OK.

• To delete a contact, click a contact in the list, and then click Delete. To confirm the deletion, click Yes.

Using Help

Using Help

The complete documentation for using your Adobe product is available in Help, a browser-based system you can access through Adobe Help Center. Help topics are updated periodically, so you can always be sure to have the most recent information available. For details, see "To check for updates" on page 2.

Important: Adobe Help systems include all of the information in the printed user guides, plus additional information not included in print. A PDF version of the complete Help content, optimized for printing, is also provided on the CD or DVD in the product box.

See also

"To navigate Help" on page 4

"To search Help topics" on page 4

To navigate Help

❖ Do any of the following:

• To view Help for a product, choose the product name from the For menu.

• To expand or collapse a section, click the blue triangle to the left of the section name.

• To display a topic, click its title.

See also

"To use bookmarks" on page 5

To search Help topics

Search using words or phrases to quickly find topics. You can search Help for one product or for all Adobe products you've installed. If you find a topic that you may want to view again, bookmark it for quick retrieval.

1 In Adobe Help Center, click Product Help, and choose a product from the For menu.

2 Type one or more words in the Search For box, and choose an option from the In menu:

This Product Searches Help for the selected product.

All Products Searches Help for all Adobe products you have installed.

3 Click Search. Topics matching the search words appear in the navigation pane, grouped by product and listed in order of relevance.

4 To view a topic, click its title.

5 To return to the navigation pane, do one of the following:

• Click the Home button.

• Click the Back button.

• Click Next Topic or Previous Topic.

See also

"To print a topic from Help" on page 5

"To use bookmarks" on page 5

Search tips

The search feature in Adobe Help Center works by searching the entire Help text for topics that contain any of the words typed in the Search For box. These tips can help you improve your search results in Help:

• If you search using a phrase, such as "shape tool," put quotation marks around the phrase. The search returns only those topics containing all words in the phrase.

• Make sure that the search terms are spelled correctly.

• If a search term doesn't yield results, try using a synonym, such as "web" instead of "Internet."

To print a topic from Help

1 Select the topic you want to print, and click the Print button.

2 Choose the printer you'd like to use, and then click Print.

To change the view

By default, Adobe Help Center opens in Full view. Full view gives you access to the Product Help, Expert Support, and More Resources sections. Switch to Compact view when you want to see only the selected Help topic and you want to keep the Help window on top of your product workspace.

❖ Click the view icon ⬜ to switch between Full and Compact views.

To use bookmarks

You can bookmark especially helpful topics for easy access, just as you bookmark pages in a web browser, and reread them at another time.

• To view bookmarks, click the Bookmarks tab in the navigation pane.

• To create a bookmark, select the topic you want to mark, and click the Bookmark button 📖. When the New Bookmark dialog box appears, type a new name in the text box if desired, and then click OK.

• To delete a bookmark, select it in the Bookmarks pane, and click the Delete button. Click Yes to confirm the deletion.

• To rename a bookmark, select it in the Bookmarks pane, and then click the Rename Bookmark button 🔲. In the dialog box, type a new name for the bookmark and then click OK.

• To move a bookmark, select it in the Bookmarks pane, and then click the Move Up button 🔼 or the Move Down button 🔽.

Tips, training, and other resources

Learning resources

Adobe provides a wide range of resources to help you learn and use Adobe products.

• "Total Training Video Workshop DVD" on page 6: Professional training videos from experts.

• "Resource Center" on page 6: Videos, tips and tricks, and other learning material on Adobe products.

• "Other resources" on page 7: Training, books, user forums, product certification, and more.

- Support: Complimentary and paid technical support options from Adobe.

- "Extras and other downloads" on page 8: Other software and content.

See also

"About Adobe Help Center" on page 2

"Using Help" on page 3

Total Training Video Workshop DVD

Presented by experts in their fields, Total Training videos provide overviews, demonstrations of key new features, and many useful tips and techniques for beginning and advanced users. Look for accompanying step-by-step instructions to selected Total Training videos in monthly updates to Resource Center.

In addition to the Total Training Video Workshop DVD included with your software, short Total Training web videos on a variety of products and topics are also available in Resource Center, and complete Total Training courseware can be purchased online from the Adobe Store.

See also

"Resource Center" on page 6

Resource Center

Resource Center provides a wealth of tips, tricks, tutorials, and instructional content in video, PDF, and HTML formats, authored by experts from Adobe and its publishing partners. You can search the entire collection or sort by product, topic, date, and type of content; new content is added monthly. Resource Center is available in English, French, German, and Japanese. Find it from the home page of the Adobe website.

Tips and tutorials in Resource Center

For free content and add-ons, visit Adobe Studio Exchange, an online community where users download and share thousands of free actions, plug-ins, and other content for use with Adobe products. To visit Adobe Studio Exchange, go to Resource Center from the home page of the Adobe website.

See also

Other resources

Additional sources of information and help are available for Adobe products.

- Visit the Training area of the Adobe website for access to Adobe Press books; online, video, and instructor-led training resources; Adobe software certification programs; and more.

- Visit the Adobe user forums, where users share tips, ask questions, and find out how others are getting the most out of their software. User forums are available in English, French, German, and Japanese from the main Support page of your local Adobe website.

- Visit the Support area of the Adobe website for additional information about free and paid technical support options. Top issues are listed by product on the Adobe U.S. and Adobe Japan websites.

- Click More Resources in Adobe Help Center to access many of the resources on the Adobe website and to create your own list of frequently visited user groups and websites and valuable contacts.

• For complete developer documentation and resources, visit the Developers area of the Adobe website at http://partners.adobe.com/public/developer/main.html. For additional backgrounders and instructional content, visit Resource Center.

Extras and other downloads

Your product includes Adobe Stock Photos, an integrated service available within Adobe Bridge that lets you search, view, try, and buy royalty-free stock photography from leading stock libraries. Because of the tight integration between Stock Photos and Adobe products, you can download images directly into your projects.

The Downloads area of the Adobe website includes free updates, tryouts, and other useful software. In addition, the Plug-ins section of the Adobe Store provides access to thousands of plug-ins from third-party developers, helping you automate tasks, customize workflows, create specialized professional effects, and more.

Adobe periodically provides downloadable updates to topics in Adobe Help Center and to Adobe Help Center software itself.

See also

"About Adobe Bridge" on page 40

"About Adobe Stock Photos" on page 56

"Resource Center" on page 6

"Other resources" on page 7

"About Adobe Help Center" on page 2

New features

What's new

With version 2.0, Adobe Premiere˙ Pro builds on its field-proven strengths, extends its reach to new formats, and provides users with even greater support for workflow integration and productivity. Here's a quick look at some of the new features that help make Adobe Premiere Pro 2.0 an integral part of Adobe's comprehensive solution for even the most demanding productions.

Customizable efficient workspaces The Adobe user interface now allows you even greater ability to customize and save workspaces of your own design. You can dock panels to one another in groups or pull any panel out of a group. When you resize a panel, the others in the workspace expand or contract as necessary to give you the most efficient use of the space.

Uncompressed HD support Capture, edit, and output full-resolution uncompressed, high-definition video through HD VTRs and other devices by way of an HD-enabled SDI card.

SD-SDI support Capture, edit, and output standard-definition digital video in either NTSC or PAL standards through an SD-SDI card.

Native HDV editing Log, batch-capture, and edit HDV footage in real time without a need for additional HDV plug-ins.

Macromedia Flash export Export your video in Macromedia˙ Flash˜, a popular format for delivery on the web and to mobile devices.

Professional VTR support Control video decks using RS-422 or RS-232 protocols.

Feet + frames timecode Display timecode in standard film formats when working with captured film footage.

Scrolling Timeline panel Choose how the Timeline panel is displayed during previews. Set the Timeline Playback Auto-Scrolling preference to Smooth Scroll to see the ruler and tracks move past a stationary indicator showing the current playback location. Choose Page Scroll to see the timeline advance by a full screen each time the playback indicator reaches the edge of the panel. Or choose No Scroll to allow the indicator to move through a stationary timeline past the edge of the panel.

GPU-accelerated rendering Tap into your Direct3D 9.0-capable graphics card to speed previews and the rendering of effects.

DVD authoring from the timeline Author menu-driven or autoplay DVDs and burn them straight from the timeline for quick client reviews and test disks.

Adobe Bridge Access, manage, and manipulate files from any of your Adobe Creative Suite applications through a single interface.

Integrated titling tool Create text and graphics titles from scratch, templates, or user-defined styles.

Lighting effects filter Add multiple spot, directional, or omni lights for varied looks within a scene.

After Effects integration Drag and drop and copy and paste to co-edit compositions between Adobe After Effects® and Adobe Premiere Pro. Additionally, users of Adobe Production Studio can use Dynamic Link. With Dynamic Link, you don't need to render an After Effects composition to view and edit it in an Adobe Premiere Pro Sequence.

Clip notes Send edited videos embedded in PDF files to your clients, and read their timecode-specific comments from markers that appear in the timeline of Adobe Premiere Pro.

Support for 4096x4096 frames Import, edit, and output image sequences at the 2K and 4K resolutions often used for online feature-film work.

Multicam editing Edit footage from multiple-camera shoots with ease. View up to four source tracks simultaneously in the quad-view monitor, and switch between them in real time while previewing their output in the Program Monitor. Create sequences by switching between sources in real time the way you would with a video switcher in a live production.

Subclip creation Trim a master clip into any number of subclips, each with its own In and Out points. You can store subclips as unique clips in the Project panel and use them independently in your sequences. You can, for example, apply different effects to different subclips made from the same master clip.

Audio clip and track effects Apply multiple effects to audio clips or tracks. Adobe Premiere Pro now includes a set of VST-format plug-ins for audio enhancement.

Digital Cinema export Export any project as a Windows Media 9 Series for Digital Cinema file at 720p or 1080p resolution, with accompanying 5.1 channel surround-sound. This helps you take advantage of the growing digital cinema trend at major film festivals.

Chapter 2: Workflow and workspace

Workflow and workspace basics

Workflow overview

Whether you're using Adobe Premiere Pro to edit video for broadcast, DVD, or the web, you're likely to follow a similar workflow.
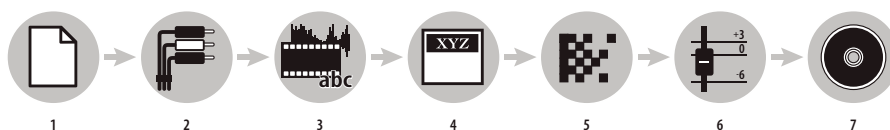
Premiere Pro workflow
1. Start or open project 2. Capture and import assets 3. Assemble and refine sequence 4. Add titles 5. Add transitions and effects 6. Mix audio 7. Export

Start or open a project

Open an existing project, or start a new one from the Adobe Premiere Pro Quickstart screen. When starting a new project, you can specify the video standard and format of sequences. (See "About projects" on page 23.)

Quickstart screen

Capture and import video and audio

Using the Capture panel, transfer footage directly from a DV camera or deck. With the proper hardware, you can digitize and capture other formats, from VHS to HDV. Each file you capture to your hard disk automatically becomes a clip in your project.
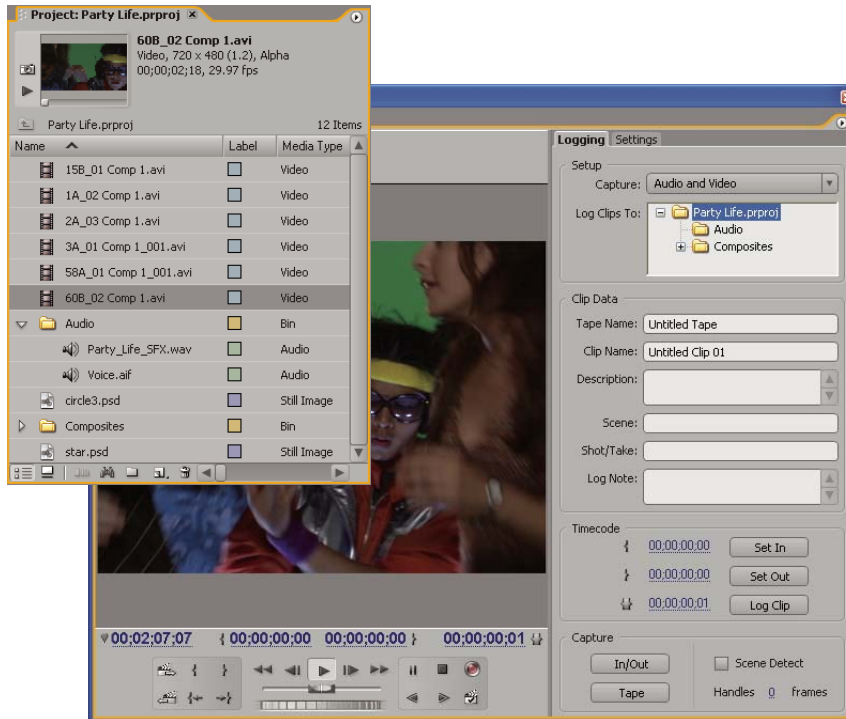
Project panel and Capture panel

Using the Project panel, you can import a variety of digital media, including video, audio, and still images. Adobe Premiere Pro also imports Adobe Illustrator° artwork or Adobe Photoshop° layered files, and translates Adobe After Effects projects for a seamless, integrated workflow. You can create synthetic media, such as standard color bars, color backgrounds, and a countdown. (See "About capturing, digitizing, and importing" on page 65.)

In the Project panel you can label, categorize, and group your footage into bins to keep a complex project organized. Using the Project panel icon view, you can arrange clips in a storyboard fashion to visualize or quickly assemble a sequence.

Assemble and refine a sequence

Using the Source Monitor, you can view clips, set edit points, and mark other important frames before adding clips to a sequence. You can view audio as a detailed waveform and edit it with sample-based precision. (See "About the Source and Program Monitors" on page 98.)
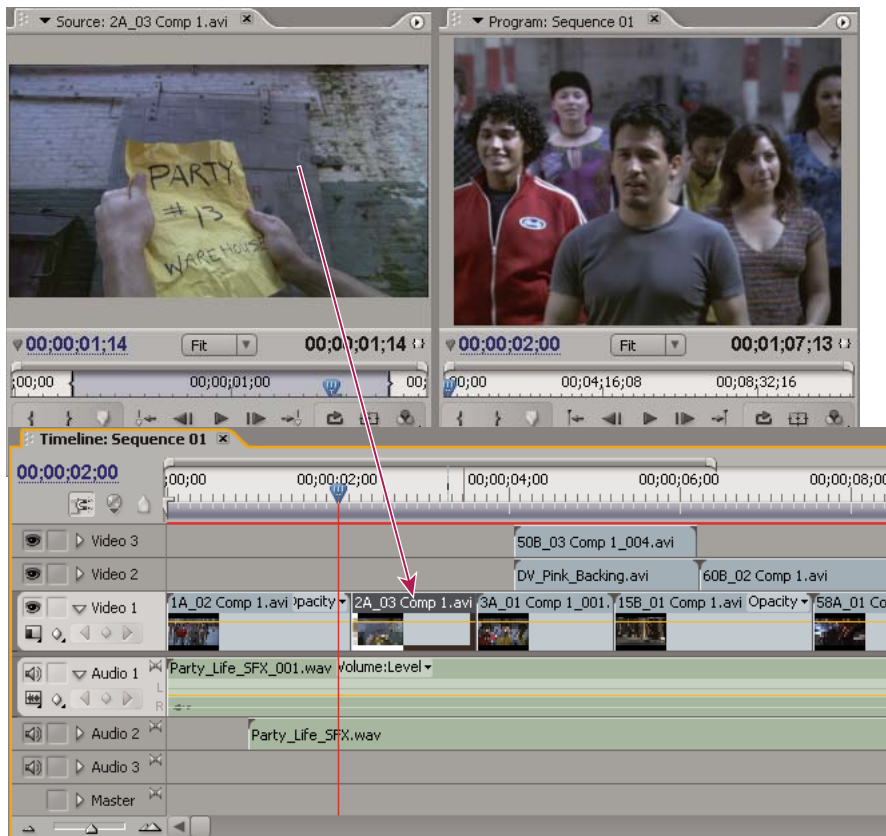
Source Monitor, Program Monitor, and Timeline panel

You add clips to a sequence in the Timeline panel by dragging or by using controls in the Source Monitor. You can automatically assemble clips into a sequence that reflects their order in the Project panel. You can view the edited sequence in the Program Monitor or watch the full-screen, full-quality video on an attached television monitor. (See "About the Timeline panel" on page 107 and "Adding clips to a sequence" on page 115.)

Refine the sequence by manipulating clips in the Timeline panel, with either context-sensitive tools or tools in the Tools panel. Use the specialized Trim Monitor to fine-tune the cut point between clips. By nesting sequences—using a sequence as a clip within another sequence—you can create effects you couldn't achieve otherwise.

Add titles

Using the Adobe Premiere Pro full-featured Titler, create stylish still titles, title rolls, or title crawls that you can easily superimpose over video. If you prefer, you can modify any of a wide range of provided title templates. As with any clip, you can edit, fade, animate, or add effects to the titles in a sequence. (See "About the Titler" on page 203.)
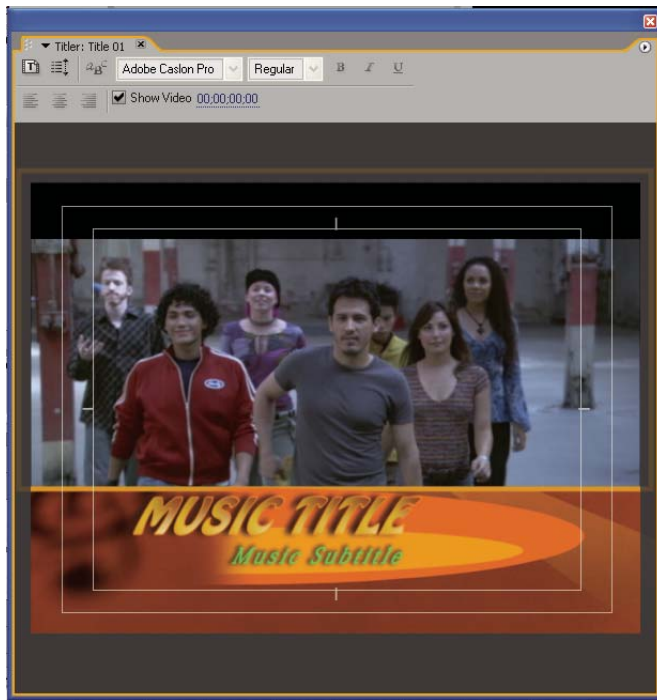
Titler

Add transitions and effects

The Effects panel includes an extensive list of transitions and effects you can apply to clips in a sequence. You can adjust these effects, as well as a clip's opacity and motion, using the Effect Controls panel. The Effect Controls panel also lets you animate a clip's properties using traditional keyframing techniques. As you adjust transitions, the Effect Controls panel displays controls designed especially for that task. Alternatively, you can view and adjust transitions and a clip's effect keyframes in the Timeline panel. (See "About transitions" on page 163 and "Working with effects" on page 250.)

Effects and Effect Controls panels

Mix audio

For track-based audio adjustments, the Audio Mixer faithfully emulates a full-featured audio mixing board, complete with fade and pan sliders, sends, and effects. Adobe Premiere Pro saves your adjustments in real time, on the fly. With the proper sound card, you can record audio through the sound mixer, or mix audio for 5.1 surround sound. (See "Mixing audio tracks and clips" on page 175.)

Audio Mixer

Export

Deliver your edited sequence in the media of your choice: tape, DVD, or movie file. With the DVD Layout panel, you can produce a DVD complete with navigational menus all from within Adobe Premiere Pro. And using the Adobe Media Encoder, even formats with extensive options—MPEG1, MPEG2, and formats for delivery via the web—are customized to the needs of your viewing audience quickly and easily. (See "About export" on page 370.)
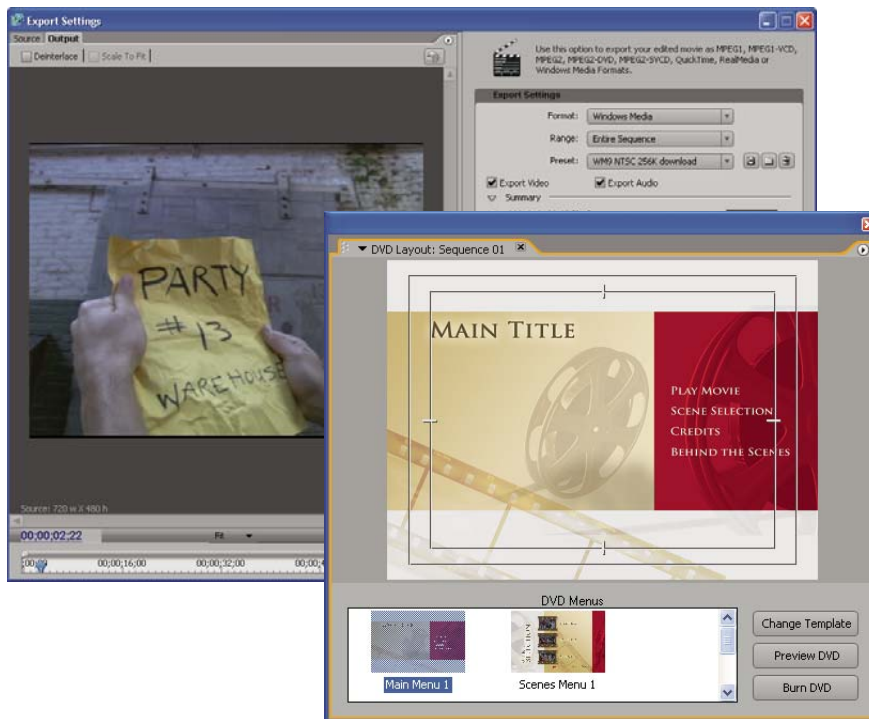
Export Settings dialog box and DVD Layout panel

About the Adobe workspace

Adobe video and audio applications provide a consistent, customizable workspace. Although each application has its own set of panels (such as Tools, Properties, Timeline, and so on), you move and group panels on your computer screen in the same way across products.

The main window of a program is the *application window*. The various panels are organized in this window in an arrangement called a *workspace*. The default workspace contains groups of panels as well as panels that stand alone.

You customize a workspace by arranging the panels, usually by dragging them, in the layout that best suits your style of working. You can create and save several custom workspaces for different tasks—for example, one for editing and one for previewing.

You can drag panels to new locations, move panels into or out of a group, place panels alongside each other, and undock a panel so that it floats in a new window above the application window. As you rearrange panels, the other panels resize automatically to fit the window.

You can use floating windows to create a workspace more like those in previous versions of Adobe applications, or to place panels on multiple monitors.
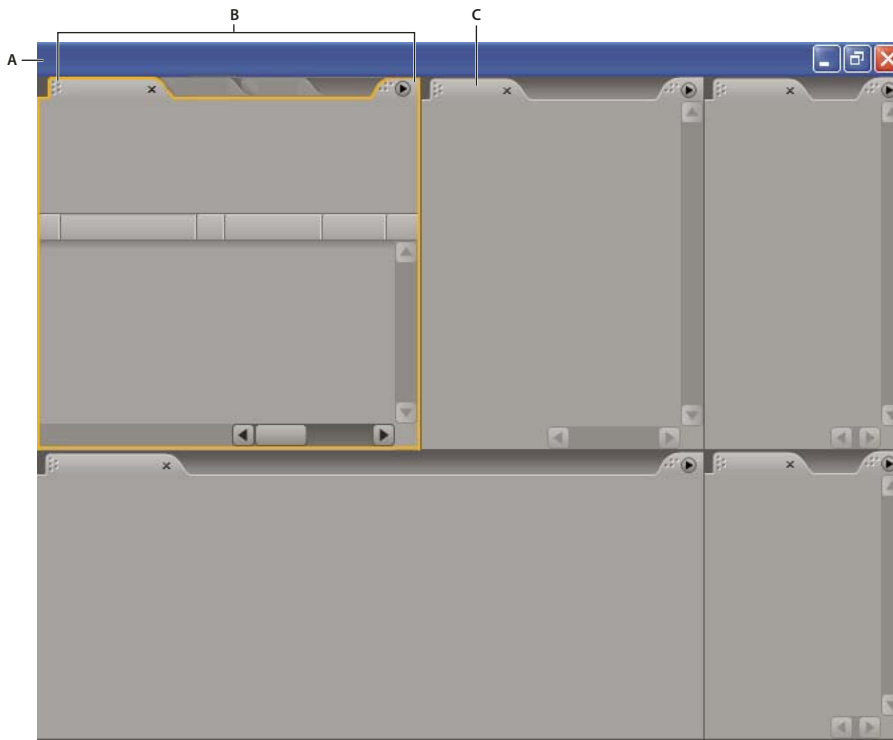
Example of workspace
A. Application window B. Grouped panels C. Panels

To display menus

In addition to choosing from the menus at the top of your screen, you can choose from *context menus*, which display commands relative to the active tool or selected item. *Panel menus* display commands relative to the active panel.

• To display panel menus, click the triangle ⊙ in the upper right corner of the panel.

• To display context menus, right-click a panel.

About the Info panel

The Info panel displays information about a selected item. For clips, the Info panel displays information such as duration, In point, and Out point. The information displayed may vary depending on the media type, the current window, and so on. For example, the Info panel displays information unique to an empty space in the Timeline panel, a rectangle in the Titler, and a clip in the Project panel display.

In the Info panel, the Video line indicates frame rate, dimensions, and pixel aspect ratio, in that order. The Audio line indicates sample rate, bit depth, and channels, in that order.

Using tools

The Tools panel contains a number of tools for editing sequences in the Timeline panel. When you select a tool, the pointer generally changes shape according to your selection. For example, when you select the Razor tool and position the pointer over a clip in the Timeline panel, the icon changes to a razor. However, the Selection tool icon may change to reflect the task currently being performed. In some cases, pressing a modifier key (such as Shift) as you use a tool changes its function, and its icon changes accordingly. Select tools from the Tools panel, or use a keyboard shortcut. You can resize the Tools panel and orient it vertically or horizontally.

Note: The Selection tool is the default tool. It's used for everything other than specialized functions. If the program isn't responding as you expect, make sure that the Selection tool is selected.

Toolbox
A. Selection tool B. Track Selection tool C. Ripple Edit tool D. Rolling Edit tool E. Rate Stretch tool F. Razor tool G. Slip tool H. Slide tool I. Pen tool J. Hand tool K. Zoom tool

See also

"History panel" on page 38

Customizing the workspace

Drop zones

Drop zones are areas onto which you can drop or move panels. As you drag a panel, the drop zones become highlighted. The drop zone determines where and how the panel is inserted into the workspace. Dragging a panel to a drop zone results in one of two behaviors: docking or grouping.

Docking

Drop zones along the edges of a panel, group, or window are docking zones. Docking a panel places it adjacent to the existing group, resizing all groups to accommodate the new panel.
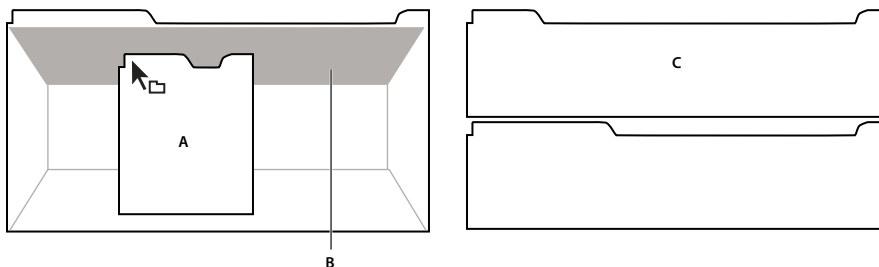
Dragging panel (A) onto docking zone (B) to dock it (C)

Grouping

The drop zone in the middle of a panel or group, as well as the zone along the tab area of a panel, are grouping zones. Grouping a panel adds it to an existing group, placing it at the top of the stacking order. Grouping a panel does not resize other groups.
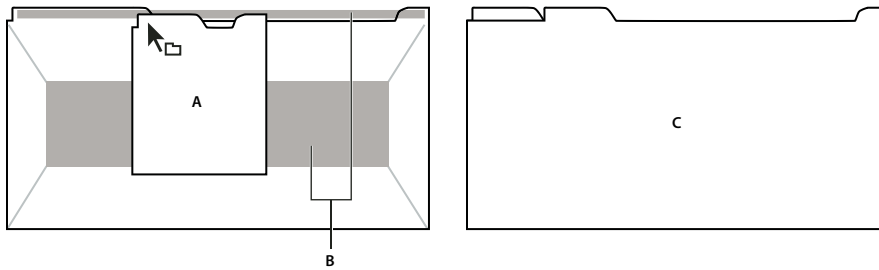
Dragging panel (A) onto grouping zone (B) to group it with existing panels (C)

To dock or group panels

You dock and group panels by dragging them onto drop zones. As you drag a panel over a drop zone, the zone becomes highlighted to provide a visual reference for the drop.

Drag the gripper area in the upper left corner of a panel's tab to move an individual panel. Drag the group gripper at the upper right corner to move an entire group.
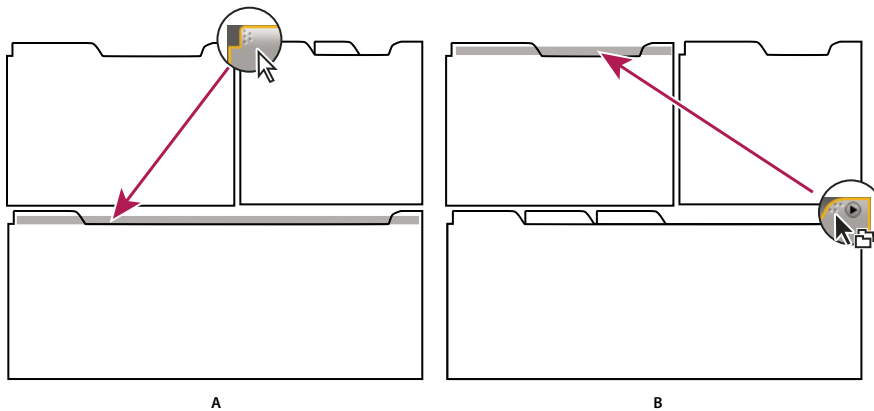
Dragging panel gripper (A) to move one panel; dragging group gripper (B) to move entire group

1 Select the panel you want to dock or group by clicking its tab. If the panel is not visible, choose it from the Window menu to open it.

2 Drag the panel by its tab onto the desired drop zone. The application docks or groups the panel, according to the type of drop zone.

See also

"Drop zones" on page 18

To open a panel in a floating window

You can open a panel in a floating window. You can add panels to the floating window or otherwise modify it, as you do the application window. You can use floating windows to create a workspace like those in earlier versions of Adobe applications, or to make use of a secondary monitor.

❖ Select the panel you want to open (if it's not visible, choose it from the Window menu), and then do one of the following:

• Ctrl-click (Windows) or Command-click (Mac OS) and drag the panel or group from its current location. When you release the mouse, the panel or group appears in a new floating window.

• Drag the panel or group outside the application window. (If the application window is maximized, drag the panel to the Windows task bar.)

To close a panel or window

When you close a panel group in the application window, the other groups are resized to make use of the newly available space. When you close a floating window, the panels within it close, too.

❖ Click the Close button ✖ on the panel or window that you want to close.

To resize panel groups

The dividers between panel groups have resize handles. You resize a group in one direction at a time, either vertically or horizontally. When you drag a divider between panel groups, all groups that share the divider are resized. For example, suppose your workspace contains three panel groups stacked vertically. If you drag the divider between the bottom two, they are resized, but the topmost group doesn't change.

1 Position the pointer over the divider between the panel groups that you want to resize. The pointer changes shape ◀╫▶.

2 Hold down the mouse button, and drag to resize the panel groups.
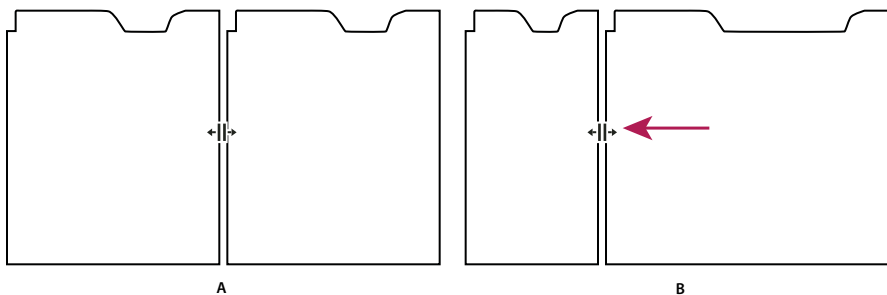
Dragging the divider between panel groups to resize them.
A. *Original group with divider selected* **B.** *Resized groups*

Working with multiple monitors

You can use multiple monitors to increase the available screen space. When you work with multiple monitors, the application window appears on the main monitor, and you place a floating window on the second monitor. Monitor configurations are stored in the workspace.

To brighten or darken the user interface

Adobe Premiere Pro lets you brighten or darken the application's graphical user interface (GUI). For example, you may prefer to lower the brightness when working in a darkened editing suite or when making color corrections. Changing the brightness preference affects panels, windows, and dialog boxes but doesn't affect scroll bars, title bars, and menus that aren't inside panels. In addition, the brightness preference doesn't affect the application background on Windows.

1 Choose Edit > Preferences > User Interface.

2 Drag the User Interface Brightness slider to the left or right. Click Default Brightness to restore the default brightness level.

3 To set the interface to match the background color specified by the Windows operating system's current appearance settings, select Use Windows Background Color.

To change the Windows operating system's appearance settings, right-click the Windows desktop and choose Properties, and then customize options in the Appearance tab in Display Properties For Windows. Consider using the Windows Classic style to reduce the font size of title bars (see Windows online Help).

To use the Events panel

Adobe Premiere Pro Events lists warnings, error messages, and other information you can use to identify and troubleshoot problems, particularly those associated with plug-ins and other components from third-party developers. An alert icon ⚠ , ⊗ , ⓘ on the status bar notifies you of an error. Double-clicking the icon opens the Events panel, and clearing the associated item from the Events panel removes the icon from the status bar.

1 Do either of the following:

• Double-click the alert icon in the status bar.

• Choose Window > Events.

2 Do any of the following:

• To learn more about an item in the list, select it and click Details.

• To clear the events list, click Clear All.

Predefined workspaces

To use an Adobe workspace

Each Adobe video and audio application includes several workspaces for various tasks. For example, Adobe Encore® DVD has workspaces for editing in the Timeline and for designing slideshows, menus, and navigation. You can choose a workspace at any time. When you choose one of these workspaces, the current workspace is redrawn accordingly.

❖ With the project you want to work on open, choose Window > Workspace, and select the desired workspace.

To create or modify a workspace

As you modify a workspace, the application tracks changes, saving any modifications with the project. The next time you open the project, the most recent version of the workspace is used. You can also choose to restore the original layout of the workspace.

You can save any workspace, as a custom workspace at any time. Once saved, new and edited workspaces appear in the Workspace menu on the local computer. If a project with a custom workspace is opened on a system other than the one on which it was created, the application looks for a workspace with a matching name. If the application finds a match (and the monitor configuration matches), it uses that workspace; if it can't find a match (or the monitor configuration doesn't match), it opens the project using the current local workspace.

❖ Arrange the frames and panels as desired, then choose Window > Workspace > Save Workspace, and enter a name for the workspace. Click Save.

To delete a workspace

1 Choose Window > Workspace > Delete Workspace.

2 Choose the workspace you want to delete, and then click Delete.

Chapter 3: Projects

Project basics

About projects

A *project* is a single Adobe Premiere Pro file that contains sequences and references to the assets (clips, still images, and audio files) associated with the sequences. A project stores information about sequences and assets, such as settings for capture, transitions, and audio mixing. Also, the project file contains the data from all of your editing decisions, such as the In and Out points for trimmed clips and the parameters for each special effect. Adobe Premiere Pro creates a folder on your hard drive at the start of each new project. By default, this is where it stores the files it captures, the preview and conformed audio files it creates, and the project file itself.

Every project includes a Project panel. This acts as a storage area for all files used in the project.

To create a project

In most cases, you can start a project simply by using one of the presets provided in the New Project dialog box. The presets included with Adobe Premiere Pro include common project types. Preserve editing quality by using a preset that conforms to the specifications of your original assets. For example, if your project uses footage mostly in DV format, use a DV preset. If you need to specify lower quality settings for output (such as streaming web video), don't change your project settings—instead, change your export settings later.

If your computer has a capture card compatible with Adobe Premiere Pro, its own optimized presets may appear in the Available Presets list.

The project settings must be correct when you create the project file. Once a project is created, some project settings, such as the timebase settings, are locked. This prevents unwanted inconsistencies that could result from changing project settings later.

1 Either choose New Project on the Welcome screen that appears when Adobe Premiere Pro starts up or, after the application is open, choose File > New > Project.

2 Do one of the following:

• To apply a preset, select it from the Available Presets list.

• To customize settings, choose the preset that most closely matches your editing environment, click Custom Settings, and then select your specific project settings. For Location, specify where you want to store the project on disk.

3 Type the name of the project, and then click OK.

Note: Whenever possible, specify a location and name that you won't have to change later. By default, Adobe Premiere Pro stores rendered previews, conformed audio files, and captured audio and video in the folder where you store the project. Moving a project file later may require moving its associated files as well.

About project settings

Project settings establish the general parameters for a given project. They control parameters such as how Adobe Premiere Pro works with your source device and video and audio files, how it renders your previews, and so on. All project settings apply to the whole project, and most can't be changed after a project is created.

Presets are groups of project settings. Adobe Premiere Pro comes with several groups of presets installed: Adobe SD0-SDI, Adobe HD-SDI, Adobe HDV, DV-NTSC, DV-PAL, and DV-24P. These contain the correct project settings for the most typical project types. When creating a new project, you can either select from among the standard presets or customize a group of project settings and save the customized group as a custom preset.

When you start a new project, you see a dialog box displaying a number of presets with selected default settings for all these parameters. You can choose one of these presets. Alternatively, you can create your own custom presets tailored to the needs of your project. If you want full control over almost all the project's parameters, you must start a new project and customize its presets.

After you begin working in a project, you can review project settings, but you can change only a few of them. Choose Project > Project Settings to view the settings you can change.

Project settings are organized into the following categories:

General Settings Control the fundamental characteristics of the project, including the method Adobe Premiere Pro uses to process video (Editing Mode), count time (Display Format), and play back video (Timebase).

Capture Settings Control how Adobe Premiere Pro transfers video and audio directly from a deck or camera. (None of the other project settings options affect capturing.) The contents of this panel depend on the editing mode. If you're capturing DV footage, you don't need to change capture settings. When DV/IEEE 1394 Capture is the selected capture format, no options are available because the options are automatically set to the IEEE 1394 standard. Additional capture formats and options may appear if you install other software, such as software included with a capture card certified to be compatible with Adobe Premiere Pro.

Video Rendering Controls the frame size, picture quality, compression settings, and aspect ratios that Adobe Premiere Pro uses when you play back video from the Timeline panel (where you edit your video program).

Default Sequence Controls the number of video tracks and the number and type of audio tracks for new sequences you create.

Note: If you must change project settings that are unavailable, you can create a new project with the settings you want and import the current project into it. However, if you import the current project into a project with a different frame rate or audio sampling rate, check video and audio edits carefully. Although edit positions made under the old settings are preserved, they may not synchronize precisely with the new settings. Edits or changes you make after importing are synchronized with the new settings.

To customize project settings

To customize most project settings, you must start a new project, select an existing preset, and then customize the preset settings.

1 Click New Project or choose File > New > Project.

2 In the Load Preset panel, select the preset that most closely matches your video footage or the needs of your capture card.

3 In the Custom Settings panel, modify the General, Capture, Video Rendering, and Default Sequence settings to match the needs of your project.

4 To save your custom settings as a preset that you can use for future projects, click Save Preset. A dialog box asks you to name and describe the custom preset. Here you can choose whether to save the device control settings as part of the preset.

5 Specify where to save the project on disk, give it a name, and then click OK.

General settings

Choose General settings that conform to the specifications of the dominant source files in your project (for example, if most of your footage is DV, use the DV Playback editing mode). Changing these settings arbitrarily may result in a loss of quality.

Editing Mode Specifies which video method is used to play back sequences, which timebases are made available, which compression methods appear in the Video Settings panel, and which display formats are available. Choose an Editing Mode option that best matches the specifications of your source footage and/or capture card. This mode does not determine the format of your final movie. You specify output settings when you export.

Timebase Specifies the time divisions Adobe Premiere Pro uses to calculate the time position of each edit. In general, choose 24 for editing motion-picture film, 25 for editing PAL (European standard) and SECAM video, and 29.97 for editing NTSC (North American standard) video. Do not confuse timebase with the *frame rate* of the video you play back or export from sequences, although timebase and frame rate are often set to the same value. The options listed for Timebase vary according to the editing mode you selected.

Playback Settings Displays playback options for most of the editing modes. Select it to display a dialog box of Realtime Playback, Export, 24P Conversion Method, and Desktop Display Mode options. You can also choose whether to disable video output when Adobe Premiere Pro is in the background, and whether to enable aspect ratio correction on external devices.

Frame Size Specifies the dimensions, in pixels, for frames when you play back sequences. In most cases, the frame size for your project should match the frame size of your source files. Don't change the frame size to compensate for slow playback—instead, adjust playback resolution by choosing a different Quality setting from the Project panel menu, or adjust the frame size of final output by changing Export settings.

Pixel Aspect Ratio Sets the aspect ratio for individual pixels. Choose Square Pixels for analog video, scanned images, and computer-generated graphics, or choose the format used by your source. If you use a pixel aspect ratio that is different from that of your video, the video may play back and render with distortion.

Fields Specifies the field dominance, or which field of each frame's interlaced fields is drawn first. If you work with progressive-scan video, select No Fields (Progressive Scan). Note that many capture cards capture fields regardless of whether you shot progressive scan footage.

Display Format (Video) Adobe Premiere Pro can display any of several formats of timecode. You may want to see the project's timecode in a film format, for example, if you are editing footage captured from film; or in simple frame numbers if your assets were imported from an animation program. Changing the Display Format option does not alter the frame rate of clips or sequences—it changes only how their timecodes are displayed. The time display options correspond to standards for editing video and motion-picture film. For Frames and Feet + Frames timecodes, you can change the starting frame number to match the time-counting method of another editing system you may be using.

The options made visible in the Display Format field depend on the Editing Mode selected. You can choose from the following Display Format options, depending on which editing mode is selected:

• **30 fps Drop-Frame Timecode** Reports time in hours, minutes, seconds, and frames, separating units with semicolons. Drop-frame timecode assumes a rate of 30 frames per second, but skips some numbers by design: To accommodate the NTSC actual frame rate of 29.97 fps drop-frame timecode skips, or *drops,* two frame numbers (not the actual frames of video) each minute except every tenth minute. Use for output to NTSC videotape.

30 fps drop-frame timecode as indicated by semicolons

• **30 fps Non Drop-Frame Timecode** Reports time in hours, minutes, seconds, and frames, separating units with colons. It assumes a rate of 30 frames per second and does not drop frame numbers. Use for output to computer displays via the web or CD-ROM.

30 fps non drop-frame Timecode as indicated by colons

• **24 fps Timecode** Reports time in hours, minutes, seconds, and frames; separating units with colons. Use for 24P footage and to output to 24-fps formats for film and DVD distribution.

24 fps timecode showing "23" as highest possible number of frames before next second

• **25 fps Timecode** Reports time in hours, minutes, seconds, and frames, separating units with colons. Use for output to PAL videotape.

25 fps timecode showing "24" as highest possible number of frames before next second

• **Feet + Frames 16mm** Reports time in feet and frames, assuming the frame rate of 16mm film: 40 frames per foot. Use for output to 16mm film.

Feet + frames 16mm timecode showing "39" as highest possible number of frames before next foot

• **Feet + Frames 35mm** Reports time in feet and frames, assuming the frame rate of 35mm film: 16 frames per foot. Use for output to 35mm film.

Feet + frames 35mm timecode showing "15" as highest possible number of frames before next foot

• **Frames** Reports time solely in a running count of frames. Does not assign measurements of either time or spatial length. Use to output sequential stills such as those generated for an animation or DPX film editor.

Frames timecode simply numbers each frame in sequential order.

Note: When working with NTSC video assets, you should usually use 30 fps drop-frame timecode. This format conforms with the timecode base inherent in NTSC video footage and displays its duration most accurately.

Title Safe Area Specifies how much of the frame edge to mark as a safe zone for titles, so that titles aren't cut off by televisions that zoom the picture slightly to enlarge it. A rectangle with cross hairs marks the title-safe zone when you click the Safe Margins button in the Source Monitor or Program Monitor. Titles are usually assumed to require a wider safe zone than action.

Action Safe Area Specifies how much of the frame edge to mark as a safe zone for action so that action isn't cut off by televisions that zoom the picture slightly to enlarge it. A rectangle marks the action-safe zone when you click the Safe Margins button in the Source Monitor or Program Monitor.

Sample Rate In general, higher rates provide better audio quality when you play back audio in sequences, but they require more disk space and processing. *Resampling*, or setting a different rate from the original audio, also requires additional processing time and affects the quality. Try to record audio at a high-quality sample rate, and capture audio at the rate at which it was recorded.

Display Format Specifies whether audio time display is measured using audio samples or milliseconds. Display Format applies when Audio Units is selected in the Source Monitor or Program Monitor menu. (By default, time is displayed in frames, but it can be displayed in audio units for sample-level precision when you are editing audio.)

Note: DV video and audio use standardized settings that are specified automatically when you select DV Playback editing mode. When you use DV Playback editing mode, avoid changing the Timebase, Frame Size, Pixel Aspect Ratio, Fields, and Sample Rate settings.

See also
"Previewing on a monitor using a video card" on page 138

Video Rendering settings
Video Rendering settings affect how Adobe Premiere Pro generates video when you select Sequence > Render Work Area.

Maximum Bit Depth Maximizes the color bit depth, up to 32 bits, to include in video played back in sequences. This setting may not be available if the selected compressor provides only one option for bit depth. You can also specify an 8-bit (256-color) palette when preparing a video program for 8-bit color playback, such as when using the Desktop editing mode for the web or for some presentation software.

Previews These options—File Format, Compressor, and Color Depth— specify how Adobe Premiere Pro plays previews. Select a combination that gives the best quality previews while keeping rendering time and file size within tolerances acceptable for your system. For certain editing modes, these settings cannot be changed.

Note: If you use a clip in your video program without applying effects or changing frame or time characteristics, Adobe Premiere Pro uses the clip's original codec for playback. If you make changes that require recalculation of each frame, Adobe Premiere Pro applies the codec that you choose here.

Optimize Stills Uses still images efficiently in sequences. For example, if a still image has a duration of 2 seconds in a project set to 30 fps, Adobe Premiere Pro creates one 2-second frame instead of 60 frames at 1/30 of a second each. Deselect this option if sequences exhibit playback problems when displaying still images.

Save and name your project settings even if you plan to use them in only one project. Saving settings creates a backup copy of the settings in case someone accidentally alters the current project settings.

To open a project
Adobe Premiere Pro can open project files created with Adobe Premiere Pro or Adobe Premiere 6.x for either Windows or Mac OS. You can open only one project at a time. If you want to transfer the contents of one project into another, import them.

1 Choose File > Open Project.

2 Browse to the project file and select it.

3 Select Open.

To locate missing files

Adobe Premiere Pro doesn't store video, audio, or still image files in the project file—it stores only a reference to each of these files based on its file name and location at the time you imported it. If you later move, rename, or delete a source file, Adobe Premiere Pro can't find it automatically the next time you open the project. In this case, Adobe Premiere Pro displays the Where Is The File dialog box.

1 Locate the file using the Look In field or the Find button.

2 Select the file and choose Select.

Note: Do not delete source files while you are using them as clips in an Adobe Premiere Pro project unless they were captured using device control and you plan to recapture them. After you deliver the final movie, you can delete source files.

To skip missing files

You don't need to locate missing files to continue working on a project. Instead, you can substitute offline files as placeholders for the missing files. You can continue editing with these offline files, but you must bring the originals back online before rendering your movie.

When you want to bring a file back online after the project is open, you don't have to close the project and open it again. Instead, use the Link Media command.

❖ Choose one of the following in the Where Is The File dialog box:

Offline Replaces a missing file with an *offline file*, a placeholder that preserves all references to the missing file everywhere in the project. Unlike the temporary offline file created by Skip, the one generated by Offline persists between sessions, so you won't have to locate missing files every time the project is opened.

Offline All Like Offline, Offline All replaces all missing files with persistent offline files.

Skip Replaces a missing file with a temporary offline file for the duration of a session. When you close your project and then reopen it, you see a dialog that asks you to locate the file or allows you to skip it again.

Skip All Like Skip, Skip All replaces all missing files with temporary offline files.

Important: Select Skip or Skip All only when you are certain that you want to rework all the instances where the file is used in the project. If you want to keep the file in the project but can't locate it at the moment, use Offline instead.

To save a project

Saving a project saves your editing decisions, references to source files, and the most recent arrangement of panels. Protect your work by saving often.

Adobe Premiere Pro may ask whether you want to save a project even though you haven't edited any sequences. This occurs because other attributes of the project may have changed since the project was opened. It's usually best to save changes when asked.

❖ Do one of the following:

• Choose File > Save to save the current project.

• To save a copy of a project and continue working in the new copy, choose File > Save As, specify a location and file name, and click Save.

• To save a copy of a project but continue working in the original project, choose File > Save a Copy, specify a location and file name, and click Save.

Note: There's no need to save copies of a project when creating different segments or versions of the same video program. Simply create new or duplicate sequences within a single project file.

To change the Auto Save settings

By default Adobe Premiere Pro automatically saves your project every 20 minutes and retains the last five versions of the project file on the hard disk. You can revert to a previously saved version at any time. Archiving many iterations of a project consumes relatively little disk space because project files are much smaller than source video files. It's usually best to save project files to the same drive as your application. Archived files are saved in the Adobe Premiere Pro Auto-Save folder.

1 Choose Edit > Preferences > Auto Save.

2 Do any of the following, and then click OK:

• Select Automatically Save Projects, and type the number of minutes between saves.

• For Maximum Project Versions, enter the number of versions of a project file you want to save. For example, if you type 10, Adobe Premiere Pro saves the ten most recent versions.

To open an Auto Save project

1 Choose File > Open project.

2 Browse to the Adobe Premiere Pro Auto-Save folder, located in the same scratch disk location as captured video files. If no files are available, the Auto Save preference may be turned off.

3 Open the project file containing the version you want to use.

Aspect ratio

About aspect ratio

Aspect ratio specifies the ratio of width to height. Video and still picture frames have a frame aspect ratio, and the pixels that make up the frame have a pixel aspect ratio. Some cameras can record various frame aspect ratios, and different video standards use different pixel aspect ratios.

You set the frame and pixel aspect ratios for an Adobe Premiere Pro project when you create it. Once they are set, you cannot change them for that project. You can, however, use assets created with different aspect ratios in that project.

Adobe Premiere Pro automatically tries to compensate for the pixel aspect ratio of source files. If an asset still appears distorted, you can manually specify its pixel aspect ratio. It's important to reconcile pixel aspect ratios before reconciling frame aspect ratios, because an incorrect frame size can be due to a misinterpreted pixel aspect ratio.

Frame aspect ratio

Frame aspect ratio describes the ratio of width to height in the dimensions of an image. For example, DV NTSC has a frame aspect ratio of 4:3 (or 4.0 width by 3.0 height) and a typical widescreen frame has a frame aspect ratio of 16:9. Many cameras that have a widescreen mode can record using the 16:9 aspect ratio. Many films have been shot using even wider aspect ratios.
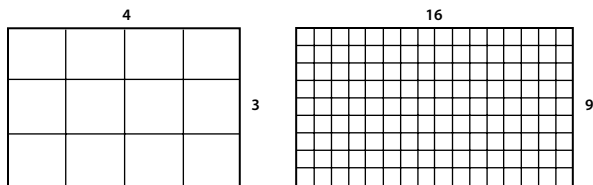
A 4:3 frame aspect ratio (left), and wider 16:9 frame aspect ratio (right)

When you import clips shot in one frame aspect ratio into a project that uses another frame aspect ratio, you must decide how to reconcile the different values. For example, there are two common techniques for showing a widescreen movie with a 16:9 frame aspect ratio on a standard television with a 4:3 frame aspect ratio. You can fit the entire width of the 16:9 frame in a black 4:3 frame (called *letterboxing*), which results in black bands above and below the widescreen frame. Or you can fill the 4:3 frame vertically with the entire height of the 16:9 frame, varying the horizontal position of the 16:9 frame behind the narrower 4:3 frame so that important action is visible in the 4:3 frame (called *pan & scan*). In Adobe Premiere Pro, you can implement either technique by using Motion effect properties such as Position and Scale.

NTSC displays
A. *16:9 NTSC footage* **B.** *DVD player display using original widescreen format on widescreen TV screen* **C.** *16:9 image on a 4:3 TV screen cropped using automatic pan and scan* **D.** *16:9 image on a 4:3 TV screen using automatic letterboxing to reduce overall frame size and display entire image*

Pixel aspect ratio

Pixel aspect ratio describes the ratio of width to height of a single pixel in a frame. Pixel aspect ratios vary because different video systems make various assumptions about the number of pixels required to fill a frame. For example, many computer video standards define a 4:3 aspect ratio frame as 640 pixels wide by 480 pixels high, which results in square pixels. Video standards such as DV NTSC define a 4:3 aspect ratio frame as 720 x 480 pixels, which results in narrower, rectangular pixels because there are more pixels within the same frame width. The computer video pixels in this example have a pixel aspect ratio of 1:1 (square), whereas the DV NTSC pixels have a pixel aspect ratio of 0.9 (nonsquare). DV pixels, which are always rectangular, are vertically oriented in systems producing NTSC video and horizontally oriented in systems producing PAL video. Adobe Premiere Pro displays a clip's pixel aspect ratio next to the clip's image thumbnail in the Project panel.

If you display rectangular pixels on a square-pixel monitor without alteration, images appear distorted; for example, circles distort into ovals. However, when displayed on a broadcast monitor, the images appear correctly proportioned because broadcast monitors use rectangular pixels. Adobe Premiere Pro can display and output clips of various pixel aspect ratios without distortion because it attempts to automatically reconcile them with the pixel aspect ratio of your project. You may occasionally encounter a distorted clip if Adobe Premiere Pro interprets pixel aspect ratio incorrectly. You can correct the distortion by manually specifying the source clip's pixel aspect ratio.
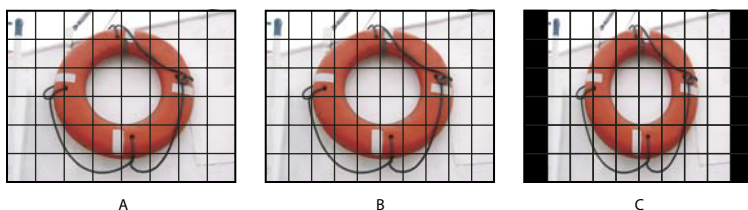
Pixel and frame aspect ratios
A. 4:3 square-pixel image displayed on 4:3 square-pixel (computer) monitor B. 4:3 square-pixel image interpreted correctly for display on 4:3 non-square pixel (TV) monitor C. 4:3 square-pixel image interpreted incorrectly for display on 4:3 non-square pixel (TV) monitor

Using assets with various aspect ratios

Adobe Premiere Pro automatically attempts to preserve the image aspect ratio of imported assets, sometimes changing the pixel aspect ratio, the frame dimensions, or both so that the asset does not appear cropped or distorted when used in a sequence. Assets created in an Adobe Creative Suite application contain metadata that allows Adobe Premiere Pro to make the calculations automatically and precisely. For assets lacking this metadata, Adobe Premiere Pro applies a set of rules to interpret pixel aspect ratio.

When you capture or import NTSC footage with the ATSC frame size of 704 x 480, the D1 frame size of 720 x 486, or the DV frame size of 720 x 480, Adobe Premiere Pro automatically sets the pixel aspect ratio for that asset to D1/DV NTSC (0.9). When you capture or import footage with the HD frame size of 1440 x 1080, Adobe Premiere Pro automatically sets the pixel aspect ratio for that file to HD 1080 Anamorphic (1.33). When you capture or import PAL footage with the D1 or DV resolution of 720 x 576, Adobe Premiere Pro automatically sets the pixel aspect ratio for that file to D1/DV PAL (1.067).

For other frame sizes, Adobe Premiere Pro assumes that the asset was designed with square pixels and changes the pixel aspect ratio and frame dimensions in a way that preserves the asset's image aspect ratio. If the imported asset is distorted, you may need to change the pixel aspect ratio manually.

When you drag an asset into a sequence, Adobe Premiere Pro centers the asset in the program frame by default. Depending on its frame size, the resulting image may be too small or overcropped for the needs of the project. If so, you may need to change its scale. You can do this manually or have Adobe Premiere Pro do it automatically whenever you drag an asset into a sequence.

It is always a good idea to make sure that files are interpreted correctly. You can read an asset's frame dimensions and pixel aspect ratio near the preview thumbnail and in the Video Info column of the Project panel. You can also find this data in the asset's Properties dialog box, the Interpret Footage dialog box, and the Info panel.

See also

"To return a logo to its original size or aspect ratio" on page 218

"About the Info panel" on page 17

To change pixel aspect ratios

The preset you choose when you create a project sets the frame and pixel aspect ratios for the project. You can't change these after you save the project file, but you can change the pixel aspect ratio that Adobe Premiere Pro assumes for individual assets. For example, if a square-pixel asset generated by a graphics or animation program looks distorted in Adobe Premiere Pro, you can correct its pixel aspect ratio to make it look right. By ensuring that all files are interpreted correctly, you can combine footage with different ratios in the same project and generate output that doesn't distort the resulting images.

1 Select the file in the Project panel.

2 Choose File > Interpret Footage, specify options in the Pixel Aspect Ratio section, and click OK.

See also

"To adjust the pixel aspect ratio of an imported still image" on page 88

To scale assets manually

When you drag an asset into a sequence, by default Adobe Premiere Pro preserves its frame size and centers the asset in the program frame. You can rescale the asset without distortion if its pixel aspect ratio has been interpreted correctly.

1 Drag the asset into a sequence and select the asset.

2 Open the Effect Controls panel.

3 Click on the arrow ▷ next to the Motion effect to reveal the motion controls.

4 Click on the arrow next to the Scale control within the Motion effect to reveal the Scale slider.

5 Move the Scale slider left or right to decrease or increase the size of the frame.

To scale assets automatically

When you drag an asset into a sequence, Adobe Premiere Pro preserves its frame size and centers the asset in the program frame. Instead, you can automatically scale imported assets to the project's default frame size.

1 Choose Edit > Preferences > General.

2 Select Default Scale To Frame Size.

3 Click OK.

About square-pixel footage

Many graphics and animation programs generate square-pixel assets meant for display on square-pixel computer monitors. Adobe Premiere Pro, however, typically generates files with non-square pixels for display on television sets. Adobe Premiere Pro automatically conforms square-pixel assets to the project's pixel aspect ratio. After the asset is conformed, however, it no longer has its original frame aspect ratio. Also, its frame aspect ratio is not likely to match that of the project, even if it did before it was conformed.

For example, suppose you generate a square-pixel asset at 720 x 540 and import it into an Adobe Premiere Pro DV project with an aspect ratio of 720 x 540. In this case, the asset will be wider than the screen when it is conformed. You can use the Scale control to set the size of the asset's frame within the project's frame. However, to preserve the asset's frame aspect ratio, Adobe Premiere Pro often needs either to crop the asset or to frame it within black bars.

You can prevent this kind of cropping and framing by generating assets from your square-pixel graphics or animation programs in a frame aspect ratio that, when conformed, matches the project's frame size exactly. For best results, use programs such as Adobe Photoshop and After Effects that include pixel aspect ratio settings, and set the frame dimensions and pixel aspect ratio to match those of your project. If the pixel aspect ratio setting is unavailable in your program, do not try to match the frame dimensions (for example, 720 x 540). Instead, ensure that the overall frame aspect ratio matches that of your project (for example, 4:3 or 16:9). Adobe Premiere Pro automatically adjusts the video so that it is not distorted.

If your square-pixel program requires frame dimensions, use the option that matches your project's output:

• 4:3 DV (NTSC) or ATSC SD—create and save the square-pixel file at 720 x 534.

• 4:3 D1 (NTSC)—create and save the square-pixel file at 720 x 540.

• 4:3 DV or D1 (PAL)—create and save the file at 768 x 576.

• 16:9 DV (NTSC)—create and save the file at 864 x 480.

• 16:9 D1 (NTSC)—create and save the file at 864 x 486.

• 16:9 DV or D1 (PAL)—create and save the file at 1024 x 576.

• 16:9 1080i HD—create and save the file at 1920 x 1080.

• 16:9 720p HD—create and save the file at 1280 x 720.

To correct recurring misinterpretations

Adobe Premiere Pro automatically assigns pixel aspect ratios to files according to a file of rules. If a specific type of image is consistently misinterpreted (distorted) when you import it, you can change the relevant rule.

1 Open a text editor, such as Notepad.

2 From within the text editor, go to the Adobe Premiere Pro Plug-ins folder.

3 Open the file named Interpretation Rules.txt.

4 Edit the rule that you want to modify, and choose Save.

Common pixel aspect ratios for assets

Common pixel aspect ratios for assets

Asset	Pixel aspect ratio	When to use
Square pixels	1.0	Your footage has a 640 x 480 or 648 x 486 frame size, is 1920 x 1080 HD (not HDV or DVCPRO HD), is 1280 x 720 HD or HDV, or was exported from an application that doesn't support nonsquare pixels. This setting can also be appropriate for footage that was transferred from film or for customized projects.
D1/DV NTSC	0.9	Your footage has a 720 x 486 or 720 x 480 frame size, and your desired result is a 4:3 frame aspect ratio.This setting can also be appropriate for footage that was exported from an application that works with nonsquare pixels, such as a 3D animation application.
D1/DV NTSC Wide-screen	1.2	Your footage has a 720 x 486 or 720 x 480 frame size, and your desired result is a 16:9 frame aspect ratio.
D1/DV PAL	1.0666	Your footage has a 720 x 576 frame size, and your desired result is a 4:3 frame aspect ratio.
D1/DV PAL Widescreen	1.422	Your footage has a 720 x 576 frame size, and your desired result is a 16:9 frame aspect ratio.
Anamorphic 2:1	2.0	Your footage was shot using an anamorphic film lens, or was anamorphically transferred from a film frame with a 2:1 aspect ratio.
HDV 1080/DVCPRO HD 720 (After Effects), HD Anamorphic 1080 (Adobe Premiere Pro)	1.33	Your footage has a 1440 x 1080 or 960 x 720 frame size and your desired result is a 16:9 frame aspect ratio.
DVCPRO HD 1080 (After Effects only)	1.5	Your footage has a 1280 x 1080 frame size and your desired result is a 16:9 frame aspect ratio.

24P projects

About 24P footage

Because support for 24P footage is built into Adobe Premiere Pro, you need to make only minor preparations to capture, import, and export 24P projects. Adobe Premiere Pro includes project presets for 24P; after you create a 24P project, you import and capture your footage as usual.

Adobe Premiere Pro also includes two options for playback of 24P footage. Both options convert footage so that it plays back at 29.97 fps, but with subtle visual and performance differences.

In Adobe Premiere Pro, you can edit images that were captured using 24P and 24P Advance (24PA) interlacing schemes. These formats allow you to capture footage to NTSC DV tape at 24 progressive frames per second.

Working with the 24P modes is useful when you intend to author a progressive scan DVD. Because Adobe Premiere Pro recognizes 24P modes, you can perform your capture and edits within the program. Then, you can use the Adobe Media Encoder to export the file from Adobe Premiere Pro. After you export the file, you can open it in Adobe Encore DVD, author your DVD, and then simultaneously export the project and burn it to DVD as a 24P MPEG-2 stream. The resulting DVD is playable on any DVD player and exhibits no interlacing artifacts if you have a 480p-capable (progressive scan-capable) DVD player and television. Alternatively, you can export the Adobe Premiere Pro 24P project in a format, such as still-image sequences, appropriate for transfer to film.

Note: Adobe Premiere Pro accepts 24P and 24PA footage only from cameras using the 24P schemes.

To create a 24P project

1 Open a new project.

2 In the New Project dialog box, choose the Load Preset tab.

3 From the Available Presets list, choose the DV - 24P folder.

4 Choose the 24P format that matches your footage.

5 Select a location, type a name for your project, and click OK.

Note: If you capture 24P footage, Adobe Premiere Pro recognizes the footage as 24P and treats it accordingly, regardless of your project settings.

To set 24P playback options

1 Choose Project > Project Settings > General.

2 Click the Playback Settings button.

3 In the 24p Conversion Method pane, select one of the following options:

Repeat Frame (ABBCD) Duplicates frames where necessary to maintain 29.97 fps playback. This option uses fewer CPU resources.

Interlaced Frame (2:3:3:2) Combines the frames in a telecine-like scheme to maintain 29.97 fps playback. This option produces smooth playback but uses more CPU resources.

4 Click OK in the Playback Settings dialog box, and click OK in the Project Settings dialog box.

To simulate film transfer

By default, Adobe Premiere Pro converts 24P DV footage to play back at 24P. If you prefer the film transfer look, however, you can make it play 24 fps footage at 29.97 fps.

Additionally, you can apply any of a number of third-party film-look plug-in effects to the master sequence. These plug-ins can often perform telecine-style conversion, or add grain or color correction to simulate various film stocks. Pay close attention to lighting and, during shooting, use tripods and do slow pans to create the appearance of using a heavy film camera. Attention to these details will give your project more of a film look.

1 Right-click a 24P clip in the Project panel.

2 Select Interpret Footage.

3 Under Frame Rate, check Remove 24p DV Pulldown.

4 Click OK.

About 24P timecode

When you import 24P footage, Adobe Premiere Pro treats it as 23.976 fps progressive scan footage. Because of this, when you work with 24P footage in a 24P project, the timecode is displayed as 24 fps. However, the camera records and logs 24P footage in 30 fps nondrop-frame timecode. When you log 24P footage for capture, you log clips according to the camera's timecode count of 30 fps nondrop-frame timecode.

For example, a clip that you log for capture may have an In point of 00:01:00:28. However, as an offline clip in a 24P project, the In point is shown as 00:01:00:23. In addition, mixing non-drop-frame footage with drop-frame footage can cause larger differences in timecode display between the project and the clip, with minutes, seconds, and entire durations seemingly out of sync. Be aware of these discrepancies as you edit.

To display 24P source timecode

If you use 30 fps nondrop-frame timecode for projects containing 24P footage, Adobe Premiere Pro drops every fifth frame from the 24P footage timecode count. When you view the properties of your 24P clip, the frame rate is shown as 23.976, but the timebase as 29.97. If you'd prefer to read a clip's original timecode, do the following:

1 Right-click the clip in the Project panel.

2 Select Interpret Footage > Use Frame Rate from File.

Improving performance

About scratch disks

When you edit a project, Adobe Premiere Pro uses disk space to store files required by your project, such as captured video and audio, conformed audio, and preview files that you create manually or that are created automatically when exporting to certain formats. Adobe Premiere Pro uses conformed audio files and preview files to optimize performance, allowing real-time editing, 32-bit floating-point quality, and efficient output.

All scratch disk files are preserved across work sessions. If you delete preview files or conformed audio files, Adobe Premiere Pro automatically recreates them.

By default, scratch disk files are stored where you save the project. The scratch disk space required increases as sequences become longer or more complex. For best performance, it is recommended that you dedicate a hard drive or drives strictly to your media assets. Specify these dedicated disks as your scratch disks. If your system has multiple disks, you can use the Edit > Preferences > Scratch Disks command to specify which disks Adobe Premiere Pro uses for media files. This is best done when you set up a new project.

In terms of performance, it's usually best to dedicate a different disk to each asset type, but you can also specify folders on the same disk. You can specify unique scratch disk locations for the following types of file:

Captured Video Video files that you create using File > Capture.

Captured Audio Audio files that you create using File > Capture.

Video Previews Files created when you use the Sequence > Render Work Area command, export to a movie file, or export to a device. If the previewed area includes effects, the effects are rendered at full quality in the preview file.

Audio Previews Files created when you use the Sequence > Render Work Area command, use the Clip > Audio Options > Render And Replace command, export to a movie file, or export to a DV device. If the previewed area includes effects, they are rendered at full quality in the preview file.

Media Cache Files created by the Media Cache feature, including conformed audio files, PEK audio files and video index files (for MPEG).

DVD Encoding Files created when you export movies to a DVD folder.

To specify scratch disks

You set up scratch disks in the Scratch Disk pane of the Preferences dialog box. Before changing scratch disk settings, you can verify the amount of free disk space on the selected volume by looking in the box to the right of the path. If the path is too long to read, position the pointer over the path name, and the full path appears in a tool tip.

1 Choose Edit > Preferences > Scratch Disks.

2 Identify a location for each type of file named in the dialog box. Adobe Premiere Pro creates a subfolder named for each file type (for instance, Captured Video) and stores the folder's associated files in it. The pull-down menu lists three default locations:

My Documents Stores scratch files in the My Documents folder.

Same As Project Stores scratch files in the same folder where the project file is stored.

Custom Allows you to specify a location of your choosing. Choose Custom, then click Browse and browse to any available folder.

Maximizing scratch disk performance

 For maximum performance, follow these guidelines:

• If your computer has only one hard disk, consider leaving all scratch disk options at their default settings.

• Set up scratch disks on one or more separate hard disks. In Adobe Premiere Pro, it's possible to set up each type of scratch disk to its own disk (for example, one disk for captured video and another for captured audio).

• Specify only partitions formatted for the NTFS file format as scratch disks. FAT32 partitions do not support large file sizes.

• Specify your fastest hard disks for capturing footage and storing scratch files. You can use a slower disk for audio preview files and the project file.

• Specify only disks attached to your computer. A hard disk located on a network is usually too slow. Avoid using removable media because Adobe Premiere Pro always requires access to scratch disk files. Scratch disk files are preserved for each project, even when you close the project. They are reused when you reopen the project associated with them. If scratch disk files are stored on removable media and the media are removed from the drive, the scratch disk won't be available to Adobe Premiere Pro.

• Although you can divide a single disk into partitions and set up partitions as scratch disks, this doesn't improve performance because the single drive mechanism becomes a bottleneck. For best results, set up scratch disk volumes that are physically separate drives.

Correcting mistakes

To correct mistakes

In case you change your mind or make a mistake, Adobe Premiere Pro provides several ways to undo your work. You can undo only those actions that alter the video program; for example, you can undo an edit, but you cannot undo scrolling in a window.

❖ Do one of the following:

• To undo the most recent change, choose Edit > Undo. (You can sequentially undo as many as 100 recent changes made to the project in any Adobe Premiere Pro panel.)

• To jump to a specific state of the project since the project was opened, select an item in the History panel.

• To undo all changes made since the last time you saved the project, choose File > Revert.

• To undo changes made before the last time you saved a project, try opening a previous version of your project in the Premiere Auto-Save folder, and then choose File > Save As to store the project in a location outside of the Premiere Auto-Save folder. The number of previous versions saved depends on the Auto Save preference settings.

• To stop a change that Adobe Premiere Pro is processing (for example, when you see a progress bar), press Esc.

• To close a dialog box without applying changes, click Cancel.

• To set all values in an applied effect back to the default values, click the Reset button for the effect in the Effect Controls panel.

See also

"To change the Auto Save settings" on page 29

"To open an Auto Save project" on page 29

History panel

Use the History panel to jump to any state of the project created during the current working session. Each time you apply a change to some part of the project, the new state of that project is added to the panel. You can modify the project from the state you select. History states aren't available for actions within the Capture and Titler panels.

The following guidelines can help you with the History panel:

• Program-wide changes, such as changes to panels, windows, and preferences, are not changes to the project itself and so are not added to the History panel.

• After you close and reopen the project, the previous states are no longer available in the History panel.

• The oldest state is at the top of the list, and the most recent one is at the bottom.

• Each state is listed with the name of the tool or command used to change the project as well as an icon representing the tool or command. Some actions generate a state for each panel affected by the action, such as the Titler. Actions you perform in such a panel are treated as a single state in the History panel.

• Selecting a state dims those below it, to indicate which changes will be removed if you work from the project at that state.

• Selecting a state and then changing the project removes all subsequent states.

To work with the History panel

❖ Do any of the following:

• To select a state, click the name of the state in the History panel.

• To navigate in the History panel, drag the panel's slider or scroll bar; or choose Step Forward or Step Backward from the panel menu.

• To delete a project state, select the state. Then choose Delete from the panel menu or click the Delete icon and click OK; alternatively, Alt-click the Delete icon.

• To clear all states from the History panel, choose Clear History from the panel menu.

Chapter 4: Adobe Bridge

The basics of Bridge

About Adobe Bridge

Adobe Bridge is a cross-platform application provided with Adobe Creative Suite and Adobe Production Studio. You can use Bridge to organize, browse, and locate the assets you need to create content for print, the web, television, DVD, film, and mobile devices. Bridge keeps native Adobe files (such as PSD and PDF) as well as non-Adobe application files available for easy access. You can drag assets into your layouts, projects, and compositions as needed, preview them, and even add metadata (file information), making the files easier to locate.

File browsing From Bridge you can view, search, sort, manage, and process image files. You can use Bridge to create new folders; rename, move, and delete files; edit metadata; rotate images; and run batch commands. You can also view information about files and data imported from your digital or DV camera.

Version Cue If you have Adobe Creative Suite 2, you can use Bridge as a central location from which to use Adobe Version Cue˚. From Bridge, you can browse all the files in a project in one place without having to start the native application for each file, including non-Adobe application files. Also, you can create new Version Cue projects, delete projects, create versions, save alternates, and set access privileges in Bridge.

Note: Adobe Version Cue is not included with Production Studio.

Bridge Center If you have Adobe Creative Suite 2, Adobe Bridge includes Bridge Center, where you can view news readers in your web browser, see your most recent activity, read about tips and tricks for using Adobe products, save groups of files, and more. Adobe Creative Suite 2 users can also use Bridge to specify color management settings and access scripts that help automate your workflow.

Note: Bridge Center is not included with Production Studio.

Camera Raw If you have Adobe Photoshop˚ or Adobe After Effects installed, you can open or import camera raw files from Bridge, edit them, and save them in a Photoshop-compatible format. You can edit the image settings directly in the Camera Raw dialog box without starting Photoshop. If you don't have Photoshop or After Effects installed, you can still preview the camera raw files in Bridge.

Stock Photos Click Adobe Stock Photos from the Favorites pane in Bridge to search leading stock libraries for royalty-free images. You can download low-resolution, complimentary versions of the images and try them out in your projects before purchasing them.

Color management You can use Bridge to synchronize color settings across Adobe Creative Suite 2 applications. This synchronization ensures that colors look the same no matter which Creative Suite application you view them in.

See also

The Bridge work area

These are the main components of the Adobe Bridge window:

The Look In menu Lists the folder hierarchy, as well as favorite and recent folders. This menu gives you a quick way to find folders containing the items you want to display. The menu is at the top of the Bridge window.

The Favorites panel Gives you quick access to folders as well as to Adobe Stock Photos and collections. If you have Adobe Creative Suite 2, you also have access to Version Cue and Bridge Center.

The Folders panel Shows the folder hierarchy. Use it to navigate to the correct folder.

The Preview panel Displays a preview of the selected file. The preview is separate from, and typically larger than, the thumbnail image displayed in the content area. You can reduce or enlarge the preview.

The Metadata panel Contains metadata information for the selected file. If multiple files are selected, shared data (such as keywords, date created, and exposure setting) is listed.

The Keywords panel Helps you organize your images by attaching keywords to them.

To start and quit Bridge, and to return to an application

Do any of the following:

- To open Bridge from an application, choose File > Browse from your application.

- (Windows) To open Bridge directly, choose Adobe Bridge from the Start menu.

- (Mac OS) To open Bridge directly, double-click the Adobe Bridge icon 🔖. By default, this is located in the Applications/Adobe Bridge folder.

- To quit Bridge, choose File > Exit (Windows) or Bridge > Quit Bridge (Mac OS).

- To return to the last open application that started Bridge, choose File > Return To *[Application]*.

💡 *If Production Studio is installed, using File > Browse to launch Bridge within a Production Studio application lets you double-click a file to open or import it within that application. For example, if you choose File > Browse from within Adobe Premiere and then double-click a Photoshop file, the file is added to the Premiere Project panel, not opened in Photoshop.*

See also

To create and close Bridge windows

❖ Do one of the following:

- Choose File > New Window to create a full-size Bridge window.

- Choose File > Close Window. In Windows, this command quits Bridge as well.

See also

To use Bridge in Compact mode

Switch to Compact mode when you want to shrink the Bridge window. In Compact mode, the panels are hidden and the content area is simplified. A subset of common Bridge commands remains available from the pop-up menu at the upper right portion of the window.

By default, the Compact mode Bridge window floats on top of all windows. (In Full mode, the Bridge window can move behind application windows.) This floating window is useful because it is always visible and usable as you work in different applications. For instance, you might use Compact mode after you select the files you plan to use, and then drag them into the application as needed.

1 Click the Switch To Compact Mode button ⬚.

2 Do any of the following:

• Choose commands from the menu at the top right of the Bridge window.

• Click the Switch To Ultra Compact Mode button ⬚ to hide the content area, further minimizing the Bridge window. You can click the button again to return to Compact mode.

• Click the Switch To Full Mode button ⬚ to return to Full mode, displaying the content area and the panels, and letting Bridge move behind the current application window.

See also

"The Bridge work area" on page 40

To adjust the Bridge window

You can adjust the Bridge window by moving and resizing the panels. For example, you can enlarge the Preview panel to display bigger thumbnails. However, you can't move panels outside the Bridge window.

❖ Do any of the following:

• Drag a panel by its tab up or down into another panel area.

• Drag the horizontal divider bar between panels to make them larger or smaller.

• Drag the vertical divider bar between the panels and the content area right or left to resize the panels or content area.

• Click the Show/Hide Panes button ◀▶ at the lower left of the Bridge window to display or hide the panels.

• Choose View, followed by the name of the panel you want to display or hide.

See also

"The Bridge work area" on page 40

To select Bridge workspaces

A Bridge workspace is a certain configuration or layout of the work area. You can select either a premade workspace or a custom workspace that you have previously saved.

❖ Choose Window, followed by the name of the workspace you want, or choose Window > Workspace, followed by one of the following commands:

Lightbox Displays just the content area of Bridge, so that you can concentrate on viewing the files.

File Navigator Displays the content area in Thumbnails view, along with the Favorites panel and Folder panel.

Metadata Focus Displays the content area in Thumbnails view, along with the Metadata panel prominently shown.

Filmstrip Focus Displays just the content area, in Filmstrip view.

To save and delete Bridge workspaces

You can save the current Bridge layout (that is, the work area configuration) as a workspace and reuse it later. By saving Bridge in various configurations, you can work in (and quickly switch between) different layouts of the work area. For instance, you might use one workspace to sort new photos and another to work with Adobe InDesign˚ files.

❖ Choose Window > Workspace, followed by one of these commands:

Save Workspace Saves the current Bridge layout as a workspace so that you can reuse it later, even if you move a panel or change the view in the content area. If you choose this command, enter a name for the workspace and click Save. You can also assign a keyboard shortcut to the workspace and specify whether to save the location of the Bridge window as part of the workspace.

Delete Workspace Deletes the saved workspace. If you choose this command, choose the workspace from the menu, and click Delete.

Reset To Default Workspace Restores the workspace to the default configuration.

To set Bridge preferences

1 Choose Edit > Preferences (Windows) or Bridge > Preferences (Mac OS).

2 Select any of the preferences categories on the left:

General Controls the general appearance settings.

Metadata Controls which sections and fields are displayed in the Metadata panel.

Labels Assigns names to each color label and specifies whether you need to press Ctrl as part of the keyboard shortcut combination to apply labels and ratings to files.

File Type Associations Specifies which application to use from Bridge to open files of the named type. For any file type, you can click the name of the application (or None) and click Browse to locate an application to use. You can also reset the file type associations to their default settings as well as hide any file types that don't have an associated application. This affects only those files that you open with Bridge, and overrides the Explorer (Windows) and Finder (Mac OS) settings.

Adobe Stock Photos Specifies Adobe Stock Photos settings.

Advanced Specifies advanced settings, including cache options and language options.

3 Click OK.

See also

"Bridge General preferences" on page 43

"Bridge Advanced preferences" on page 44

"To set Adobe Stock Photos preferences" on page 64

Bridge General preferences

Set any of the following General preferences and click OK:

Background Specifies the darkness of the content area in which thumbnails are shown.

Show Tooltips Specifies whether to display Bridge help information when you position the pointer over an item. (This preference does not affect settings for Version Cue tool tips, which display metadata for items.)

Additional Lines Of Thumbnail Metadata Specifies whether to show additional metadata information with thumbnails in the content area. If you select this option, you can choose the type of metadata to show from the associated menu. You can display up to three extra lines of information.

Favorites Items Specifies what items to show in the Favorites panel. Certain options are dimmed if you do not have those items.

Reveal Scripts In Explorer/Finder Opens the folder that contains scripts (the commands available in the Tools menu).

Reset All Warning Dialogs Resets warning notices in Bridge to their default settings.

Bridge Advanced preferences

Set any of the following Advanced preferences and click OK:

Do Not Process Files Larger Than Specifies the maximum file size of documents for which Bridge automatically creates thumbnails. Displaying large files can slow performance.

Number Of Recently Visited Folders To Display In The Look In Popup Sets the number of most recently viewed folders that appear in the Look In menu.

Language Sets the language used in the Bridge interface.

Double-Click Edits Camera Raw Settings In Bridge Opens camera raw files in the Adobe Camera Raw dialog box in Bridge.

Use A Centralized Cache File Places the two cache files created for each folder you view in a centralized folder. A centralized cache is generally easier to use than a distributed cache. For instance, when the cache is centralized, you don't have to search in multiple, distributed locations if you want to remove the cache. To specify a new name or location for this centralized cache folder, click Choose.

Use Distributed Cache Files When Possible Places the two cache files created for each folder displayed in the viewed folder, if possible. For instance, it's not possible to place the cache files in the viewed folder if that folder is on a burned CD. In that case, Bridge places the cache files in the centralized folder instead. However, if you are burning a CD, using a distributed cache means that you don't have to export the cache to the CD, because it is already in the folder being burned to the CD.

Note: Cache files are hidden files. To view them in Bridge, choose View > Show Hidden Files.

To work with the cache in Bridge

The cache stores thumbnail, metadata, and file information to shorten loading times when you return to a previously viewed folder. However, storing the cache takes up disk space.

Note: Purging the cache deletes the metadata cache and thumbnail cache. If the metadata can't be written to a file, label and rating information is lost as well.

❖ Choose any of the following commands from the Tools > Cache submenu:

Build Cache For Subfolders Builds, as a background process, a cache for the selected folder and all the folders within it (except aliases/shortcuts to other folders). This shortens the time spent waiting for the cache to be displayed as you look in subfolders.

Purge Cache For This Folder Clears the cache for the selected folder. This command is useful if you suspect that the cache for a folder is old and needs to be regenerated.

Purge Central Cache Clears the entire centralized cache and any distributed cache in the currently viewed folder, freeing room on the hard drive. The command does not otherwise clear local caches.

Export Cache Exports the cache, allowing you to burn a CD with the cache already generated. Because the folder cache is written into the folder, the thumbnail cache and metadata cache are available after you burn the CD. This option is active only if you chose Use A Centralized Cache File in the Preferences dialog box.

Files and folders in Bridge

To view file and folder thumbnails in Bridge

The content area of Bridge displays thumbnails of the files and folders of the selected folder, along with information about them. You can specify how you want files and folders to be displayed in the content area.

❖ Do any of the following:

• Drag the Thumbnail slider ⬦ at the bottom of the Bridge window to adjust the size of thumbnails.

• Choose View > As Thumbnails to display items in a grid.

• Choose View > As Filmstrip to display thumbnails in a scrolling list along with an extra-large thumbnail of the currently selected item. Click the Back button or Forward button directly below the extra-large thumbnail to go to the previous or next thumbnail. Click the Switch Filmstrip Orientation button ⟳ to change from a horizontal slide show to a vertical one. Note that you can page through a PDF preview in Filmstrip view.

• Choose View > As Details to display a scrollable list of thumbnails along with information about the selected file.

• Choose View > As Versions And Alternates to display a scrollable list of thumbnails, including thumbnails of any Version Cue alternates and versions for each item (Adobe Creative Suite 2 only). Only the current file appears unless you have created an alternates group containing the file or created previous versions of the file. Click Alternates View or Versions View at the top right of the content area to display thumbnails of alternates or versions. In Alternates View, you can also create alternates groups containing files that are not in the current folder.

• Choose View > Show Thumbnail Only to view thumbnails without any text information listed. However, Version Cue tool tips still display Version Cue information when you position the pointer over the thumbnail.

• Choose View > Slideshow to view thumbnails as a slide show that takes over the entire screen. This is a quick and easy way to display and work with large versions of all the graphics files in a folder. Instructions on how to use the slide show are displayed on the screen when you choose this command.

💡 *Depending on the view you're in, you can display extra file information by positioning the pointer over a thumbnail in the content area. For files in Version Cue projects (Adobe Creative Suite 2 only), you can also choose File > Versions or File Alternates. This command opens a dialog box that lets you work with the file's versions or alternates without having to select that view in the Bridge content area.*

To specify how files and folders are shown in Bridge

You can specify what type of files and folders you want to display as thumbnails in the content area, as well as the order in which to display them.

❖ Choose any of the following commands from the View menu:

• Sort, followed by the order in which you want to sort files. Choose Ascending to sort in ascending rather than descending order. Choose Manually to sort by the last order in which you dragged the files.

• Show Hidden Files to display hidden files, such as cache files and Version Cue files that have been provisionally removed (not permanently deleted) from Version Cue projects.

• Show Folders to display folders as well as individual files.

• Show All Files to display all files regardless of type, even non-Adobe files that Bridge doesn't normally display.

• Show Graphic Files Only to display only files in graphic file formats, such as EPS, JPEG, BMP, PS, TIFF, and GIF.

• Show Camera Raw Files Only to display only camera raw files.

• Show Vector Files Only to display only files created with drawing programs such as Adobe Illustrator®, and EPS and PS files.

• Refresh (or choose Refresh from the Folders panel menu) to update the content area. This is useful, for instance, when you perform certain Version Cue actions that don't automatically refresh the view in the content area. Closing and reopening Bridge also refreshes the view.

You can also click Unfiltered at the top right of the Bridge window and choose the files you want to display based on their rating or label. The Unfiltered menu operates independently of the View > Sort commands.

To navigate folders and files with Bridge

❖ Do any of the following:

• Select the Folders panel and click to select the folder you want. Click the plus sign (Windows) or triangle (Mac OS) next to a folder or double-click the folder to open subfolders within it.

• Select the Favorites panel and click to select the folder you want.

• Choose a folder from the Look In menu. You can click the Go Back button, Go Forward button, or Go Up button next to the menu to navigate within the current folder listed in the menu.

See also

"To specify how files and folders are shown in Bridge" on page 45

To select files in Bridge

Before you can work with a file, you need to select it. You can select more than one file at a time.

❖ Do one of the following in the current folder:

• Click the thumbnail of a file.

• To select contiguous files, Shift-click them.

• To select noncontiguous files, Ctrl-click (Windows) or Command-click (Mac OS) them.

• To select all labeled or unlabeled files, choose Edit > Select Labeled or Edit > Select Unlabeled.

• To select the opposite of the current selection, choose Edit > Invert Selection.

To open files in Bridge

You can open files in Bridge, even files that were not made with Adobe applications.

1 Select the file in the current folder.

2 Do one of the following:

• Choose File > Open.

- Press Enter (Windows) or Return (Mac OS).

- Double-click the file in the content area or Preview panel.

- Choose File > Open With, followed by the name of the application with which to open the file.

- Drag the file into the working area of an application, such as an open Illustrator document.

- Drag the file onto the application icon.

- Choose File > Open In Camera Raw to edit the Adobe camera raw settings for the file.

- Choose File > Open In Adobe Encore DVD As, followed by the file type (Asset, Menu, Timeline, or Slideshow) you want to use (Windows only).

If you choose File > Browse to launch Bridge within a Production Studio application, double-clicking a file opens or imports that file within the application.

To manage files with Bridge

Adobe Bridge makes it easy to drag and drop files, move them between folders, copy and duplicate them, and otherwise manipulate them.

Note: If you have Adobe Creative Suite 2, you can also use Adobe Version Cue from Bridge to manage files you author. You can create and manage revisions to files kept in Version Cue projects. Version Cue is also a convenient environment for collaborative file management in workgroups. You can manage not only Adobe Creative Suite files but also other Adobe and non-Adobe files.

❖ Do any of the following:

To delete files Select the files and click the Delete button 🗑 or press Delete.

To copy files and folders Select the files or folders and choose Edit > Copy, or Ctrl-drag (Windows) or Option-drag (Mac OS) the file or folders to a different folder.

To move files to another folder Select the files and drag them to a different folder. (When you search for Adobe Stock Photos, you can't drag images to other areas, because some images may be comp thumbnails. To drag a comp image, first download it and then drag it from the downloaded comp's folder.)

To quickly attach an image to an e-mail message, drag the image from Bridge and drop it into the e-mail message.

To display the location of a file in the operating system Select the file and choose File > Reveal In Explorer (Windows) or File > Reveal In Finder (Mac OS).

To find the location of a file in a collection Select a file and choose File > Reveal In Bridge. A collection is a saved search. By default, if you select a file in a collection, the file is listed as being located in the folder "File Results." Selecting Reveal In Bridge moves you to the folder in which the file is located.

To place files into an application Select the files and choose File > Place, followed by the name of the application. For instance, you can use this command to place a JPEG image into Illustrator. You can also drag files from Bridge into an application. Depending on the file, the document into which you want to place it may need to be opened first.

To drag files out of Bridge Select the files and drag them onto the desktop or into another folder. This action moves the file onto the desktop or folder.

To drag files into Bridge Select one or more files on the desktop, in a folder, or in another application that supports drag and drop, and drag them into the content area in Bridge. The files are moved from their current folder into the one displayed in Bridge. (If the file you are dragging is in a different mounted volume than Bridge, the file is copied into Bridge.)

Drag a file or folder onto the Preview panel to display the contents of the folder in Bridge.

To manage folders with Bridge

❖ Do any of the following:

To create new folders Choose File > New Folder. Then, enter a name when the folder appears in the content area.

To delete folders Select the folder and press Delete.

To add folders to Favorites Choose a folder from the Look In menu or Folders panel or select it in the content area. Then choose File > Add To Favorites. You can also drag the folder from the content area to the Favorites panel.

To remove folders from Favorites In the Favorites panel, select the folder you want to remove. Then choose File > Remove From Favorites.

To reorganize folders in the Favorites panel Drag the folder to the desired location in the panel.

To rotate images with Bridge

You can rotate the view of JPEG, PSD, TIFF, and camera raw file images in Bridge. Rotating an image in Bridge may rotate it in the application in which it was created as well. Rotating does not affect the data in the image file.

1 Select one or more images in the content area.

2 Choose Edit > Rotate 90˚ Clockwise, Rotate 90˚ Counterclockwise, or Rotate 180˚.

To label files with Bridge

Labeling files with a certain color is a flexible way to mark a large number of files quickly. Using the View > Sort menu or Unfilter button, you can choose to view files according to their color label.

For example, suppose you've just imported a large number of images and are viewing them in Bridge. As you review each new image, you can label those you want to keep. After this initial pass, you can use the Unfilter button to display and work on files that you've labeled with a particular color.

You can assign names to labels through the Preferences dialog box. The name is then added to the file's metadata when you apply the label.

Note: When you view folders, Bridge shows both labeled and unlabeled files until you choose another option. Also, purging the cache deletes labels from files that don't support XMP write (such as BMP, DCS, Pict, PS6 PDF, and PSB files), locked files, or read-only files (such as files on CDs).

1 Select one or more files.

2 Do one of the following:

• To label files, choose a color from the Label menu.

• To remove labels from files, choose Label > No Label.

See also

"To specify how files and folders are shown in Bridge" on page 45

To rate files with Bridge

When assigning ratings to files, you can award from zero to five stars. Using the View > Sort menu or Unfilter button, you can choose to view files according to their rating.

For example, suppose you've just imported a large number of images and are viewing them in Bridge. As you review each new image, you can rate them from best to worst. After this initial pass, you can view only files you've rated with four or five stars and work on those.

1 Select one or more files.

2 Do any of the following:

• In Thumbnail view, click the dot representing the number of stars you want to give the file. (Dots do not appear in very small thumbnail views. If necessary, rescale the thumbnail view until the dots appear.)

• Choose a rating from the Label menu.

• To add or remove one star, choose Label > Increase Rating or Label > Decrease Rating.

• To remove all stars, choose Label > No Rating.

See also

"To specify how files and folders are shown in Bridge" on page 45

To search for files and folders with Bridge

You can perform searches with Bridge. You can narrow your search by adding multiple search criteria. You can even save your search criteria as a *collection*, so that you can perform the same search again later.

1 Choose Edit > Find.

2 In the Find dialog box, choose a source folder from the Look In menu. By default, the menu displays the currently active folder. Click the Browse button to navigate to another folder.

3 (Optional) Select Include All Subfolders to expand the search to any subfolders in the source folder.

4 (Optional) Select Search Past Versions Of Version Cue Files to include past versions of Adobe Version Cue files, as well as current ones, in the search (Adobe Creative Suite 2 only).

5 (Optional) Select Show Find Results In A New Browser Window to display the search results in a new Bridge window. If left unselected, the search results appear in the content area of the current window.

6 Choose a criterion for your search by selecting an option from the leftmost Criteria menu.

7 Select a limiter from the center Criteria menu.

8 Enter the search text in the text box at the right, if needed. You can enter basic search terms such as AND, OR, and * (for wild cards).

9 To add search criteria, click the plus sign button. To remove search criteria, click the minus sign button.

10 Click Find. Bridge displays the files that match the search criteria, and you can navigate through the files.

11 (Optional) To save the search criteria to perform the same search again, click Save As Collection. Enter a name for the collection. Select Start Search From Current Folder to search from the same folder in the future. Then, click Save. The search criteria are saved in the Collections folder listed in the Favorites panel.

See also

"To search with criteria saved as collections" on page 50

To search with criteria saved as collections

If you saved search criteria by using the Save As Collection option in the Find dialog box, you can run that search again by using that collection.

1 Select Collections in the Favorites panel or Look In menu.

2 Double-click the collection you want.

A new Bridge window appears containing the results of the search.

See also

"To search for files and folders with Bridge" on page 49

Running automated tasks with Bridge

To run automated tasks with Bridge

The Tools menu contains submenus for various commands available in the different Adobe applications. For instance, if you have Adobe Photoshop installed, you can use the commands under the Tools > Photoshop submenu to make picture packages and create Photomerge panoramas using photos you select in Bridge. Running these tasks from Bridge saves time because you don't have to open each file individually.

Note: Third parties can also create and add their own items to the Tools menu for added functionality in Bridge. For information about creating your own scripts, see Bridge JavaScript Scripting Reference.

1 Select the files or folders you want to use. If you select a folder, the command is applied where possible to all files in the folder.

2 Choose Tools > *[Application]*, followed by the command you want. (If your application doesn't have any automated tasks available, no application name appears in the menu.)

For information about a particular command, see the documentation for that application.

To batch-rename files with Bridge

You can rename files and folders in a group, or batch. When you batch-rename files, you can choose the same settings for all the selected files.

1 Do one of the following:

• Select the files that you want to rename.

• Select a folder in the Folders panel. The new setting will apply to all the files in the folder.

2 Choose Tools > Batch Rename.

3 Set the following options and click Rename:

• For Destination Folder, select whether you want to place the renamed files in the same folder or in a different folder, move them to another folder, or place a copy in another folder. If you select Move To Other Folder or Copy To Other Folder, click Browse to select the folder.

• For New Filenames, choose elements from the menus or enter text into the text boxes. The specified elements and text are combined to create the new file name. You can click the + button or - button to add or delete elements. A preview of the new file name appears at the bottom of the dialog box.

Note: If you choose Sequence Number, enter a number. The number is automatically incremented for each file named.

• Select Preserve Current File Name In XMP Metadata if you want to retain the original file name in the metadata.

• For Compatibility, select the operating systems with which you want renamed files to be compatible. The current operating system is selected by default, and cannot be deselected.

Metadata in Bridge

About metadata

Metadata is information about the file, such as the author's name, resolution, color space, copyright, and keywords applied to it. You can use metadata to streamline your workflow and organize your files. This information is stored in a standardized way using the Extensible Metadata Platform (XMP) standard on which Adobe Bridge and the Adobe Creative Suite applications are built. XMP is built on XML, and in most cases the information is stored in the file so that it cannot be lost. If it is not possible to store the information in the file itself, XMP metadata is stored in a separate file called a *sidecar file*.

Many of the powerful Bridge features that allow you to organize, search, and keep track of your files and versions depend on XMP metadata in your files. Bridge provides two ways of working with metadata: through the Bridge Metadata panel and through the File Info dialog box. These methods provide different views into the XMP metadata stored in the file. In some cases, multiple views may exist for the same property. For example, a property may be labeled Author in one view and Creator in another, but both refer to the same underlying property. Even if you customize these views for specific workflows, they remain standardized through XMP. The Advanced view in the File Info dialog box displays the fundamental values being stored.

Metadata that is stored in other formats, such as EXIF, IPTC (IIM), GPS, and TIFF, is synchronized and described with XMP so that it can be more easily viewed and managed. Other applications and features (for example, Adobe Version Cue) also use XMP to communicate and store information such as version comments. For instance, when you save a file in Version Cue, you might add the comment that you rotated the file when you worked on it. Later on, you could use Bridge to navigate to that Version Cue project and search for the term "rotate" to locate that file.

In most cases the metadata remains with the file even when the file format changes, for example, from PSD to JPG. Metadata is also retained when those files are placed in an Adobe InDesign layout.

You can use the XMP Software Development Kit to customize the creation, processing, and interchange of metadata. For example, you can use the XMP SDK to add fields to the File Info dialog box. More information on XMP and the XMP SDK is available from the Adobe Solutions Network on the Adobe Website.

About the Metadata panel in Bridge

From the Metadata panel, you can view and edit the metadata for selected files, use metadata to search for files, and use templates to append and replace metadata. Metadata preserves information about the contents, copyright status, origin, and history of documents. Version Cue uses metadata to manage files.

You can specify the types of metadata displayed in the Metadata panel.

Note: If you have applied metadata to an Adobe Acrobat® PDF file, some keywords may not appear; however, these keywords are still attached to the PDF file.

Depending on the selected file, the following types of metadata appear in the Bridge Metadata panel:

File Properties Describes the characteristics of the file, including the size, creation date, and modification date.

IPTC Core Displays editable metadata. You can add captions to your files as well as copyright information. IPTC Core is a new specification that was approved by IPTC (International Press Telecommunications Council) in October 2004. It differs from the older IPTC (IIM, legacy) in that new properties have been added, some property names have changed, and some properties have been deleted. You can display the older IPTC (IIM, legacy) metadata by selecting it from the Metadata options in the Preferences dialog box.

IPTC (IIM, legacy) Displays editable metadata. As with IPTC Core, you can add captions to your files as well as copyright information.This set of metadata is hidden by default, because it has been superseded by IPTC Core. However, you can choose it by selecting it from the Metadata options in the Preferences dialog box.

Fonts Lists the fonts used in Adobe InDesign files.

Swatches List the swatches used in Adobe InDesign files.

Camera Data (Exif) Displays information assigned by digital cameras. EXIF information includes the camera settings used when the image was taken.

GPS Displays navigational information from a global positioning system (GPS) available in some digital cameras. Photos without GPS information don't have GPS metadata.

Camera Raw Displays settings applied by the Camera Raw plug-in.

Edit History Keeps a log of changes made to images with Photoshop.

Adobe Stock Photos Lists information about images obtained from Adobe Stock Photos.

Version Cue Lists any Version Cue version information about the file.

Note: Depending on the applications you are using, custom panels for various properties may appear here as well.

To view metadata with Bridge

❖ Do any of the following:

• Select one or more files and view the information in the Metadata panel. If you select multiple files, only metadata that is common to the files appears. Use the scroll bars to view hidden categories. Click the triangle to display everything within a category.

You can change the font size in the panel by choosing Increase Font Size or Decrease Font Size from the panel menu.

• Select one or more files and choose File > File Info. Then, select any of the categories listed on the left.

• Choose View > As Details or View > As Versions And Alternates to display the metadata next to the thumbnails in the content area. This is especially useful for viewing Version Cue files.

• Position the pointer over a thumbnail in the content area. (Metadata appears in a tool tip only if Show Tooltips is selected in General preferences.)

To edit metadata with Bridge

1 Click the pencil icon to the far right of the metadata field you want to edit.

2 Type in the text box to edit or add metadata.

3 Press Tab to move through metadata fields.

4 When you have finished editing the metadata, click the Apply button ✔ at the bottom of the Metadata panel. To cancel any changes you've made, click the Cancel button ⊘ at the bottom of the panel.

To specify the metadata displayed in the Metadata panel

1 Do one of the following:

• Choose Preferences from the Metadata panel menu.

• Choose Edit > Preferences (Windows) or Bridge > Preferences (Mac OS), and then click Metadata from the list on the left side of the dialog box.

2 Select the metadata fields that you want to display in the Metadata panel.

3 Select the Hide Empty Fields option if you don't want to view fields with no information in them.

4 Click OK.

To add metadata using the File Info dialog box

The File Info dialog box displays camera data, other file properties, an edit history, copyright and authorship information (if any), and custom metadata panels (if the application has installed them). You can add metadata directly from the File Info dialog box. If you select multiple files, the dialog box shows where different values exist for a text field. Any information you add to a field is applied to all selected files.

Note: You can also view metadata in the Metadata panel, in certain views in the content area, and by placing the pointer over the thumbnail in the content area.

1 Select one or more files.

2 Choose File > File Info.

3 Select any of the following from the list on the left side of the dialog box:

Description Lets you enter document information about the file, such as document title, author, description, and keywords that can be used to search for the document. You can also choose text from the menu to the right of the text fields. To specify copyright information, select Copyrighted from the Copyright Status pop-up menu. Then enter the copyright notice string and the URL of the person or company holding the copyright.

Audio Data 1 Lets you enter information about the audio file, including the title, artist, and album.

Audio Data 2 Lists information about the audio file, including bit rate, duration, and loop settings.

Categories Lets you enter information based on Associated Press categories. You can also choose text from the menu to the right of the text fields. The Categories option appears only if Adobe Photoshop is installed.

History Displays Adobe Photoshop history log information for images saved with Photoshop. The History option appears only if Adobe Photoshop is installed.

Camera Data 1 Displays read-only information about the camera and settings used to take the photo, such as make, model, shutter speed, and f-stop. The Camera Data 1 option appears only if Adobe Photoshop or Production Studio is installed.

Camera Data 2 Lists read-only file information about the photo, including pixel dimensions and resolution. The Camera Data 2 option appears only if Adobe Photoshop or Production Studio is installed.

Adobe Stock Photos Lists read-only information about images obtained from Adobe Stock Photos.

Video Data 1 Lists information about the video file, including video frame width and height; and lets you enter information about the video file, including tape name and scene name.

Video Data 2 Lists information about the video, including alternate tape name and timecode values.

Origin Lets you enter file information that is useful for news outlets, including when and where the file was created, transmission information, special instructions for handling the file, and headline information. You can also choose text from the menu to the right of the text fields.

Advanced Displays fields and structures for storing metadata using namespaces and properties, such as file format and XMP, EXIF, and PDF properties. You can do any of the following with the information listed:

• Click Save to export the metadata to a text file (with the .xmp file-name extension).

• Click Replace to replace the metadata in the existing files with metadata saved in an XMP file. Values in existing properties are replaced with the new values.

• Click Append to add the metadata in the existing files to metadata saved in an XMP file. Values in existing properties are not replaced, and new values are appended or inserted where appropriate.

• Click Delete to remove the currently selected Advanced property. You can Shift-click to select multiple properties.

Note: Hold down the Alt key (Windows) or Option key (Mac OS) to change these commands to Replace All, Append All, and Delete All. These commands then affect all information in the file; that is, EXIF information that is not modifiable by the user, such as the f-stop and the Photoshop file ID information, as well as user-modifiable information, such as document title and keywords. Holding down Alt (Windows) or Option (Mac OS) also displays the Reset button to restore the previous settings.

4 Click OK to apply the changes.

To work with metadata templates in Bridge

You can modify the metadata in the File Info dialog box and save it as a template for use with other files.

1 Create a new file using an Adobe Creative Suite or Production Studio application. This creates a file without metadata from any other source.

2 Select the file.

3 Choose File > Info.

4 Enter the desired information in the File Info dialog box.

5 Choose any of the following from the menu at the upper right of the File Info dialog box:

• To save the metadata in the File Info dialog box as a template for use with other files, choose Save Metadata Template. Enter a name for the template and click Save.

• To delete an existing metadata template, choose Delete Metadata Template. Choose the template you want to delete from the menu in the dialog box and click Delete.

• To open the folder containing metadata templates, choose Show Templates.

6 Click OK. You can now also apply metadata templates to files with the Append Metadata and Replace Metadata commands in the Tools menu and in the Metadata panel menu.

To apply metadata templates to files in Bridge

After you have saved metadata for one file, you can apply it to others.

1 Select one or more files.

2 Choose either of the following commands from the Metadata panel menu or the Tools menu:

• Append Metadata, followed by the name of the template. This command applies the template metadata only where no metadata value or property currently exists in the file.

• Replace Metadata, followed by the name of the template. This command completely replaces any existing metadata in the file with the metadata in the template.

To apply keywords to files with Bridge

The Keyword panel lets you create and apply Bridge keywords to files. Keywords can be organized into categories called *keyword sets*. Using keywords, you identify files based on their content. Later, you can view all files with shared keywords as a group.

Note: Bridge keywords are distinct from XMP keywords created with the File Info dialog box. The latter are displayed in Version Cue files in the "Other Metadata" section of the File Info dialog box.

❖ Do any of the following:

• To add a keyword to files, select one or more files. In the Keywords panel, click the box next to the name of the keyword you want to add. A check mark appears in the box next to the keyword when it's added to a file.

• To add a set of keywords to files, select one or more files. In the Keywords panel, click the box next to the name of the keyword set. A check mark appears in the box next to the keyword set when it's added to a file.

💡 *Create a group of frequently used keywords so that you can apply them as a group.*

• To remove keywords from a file, select the file, and then click the box next to the name of the keyword or keyword set that you want to remove.

• To create a new keyword, click the New Keyword button 🔲 at the bottom of the panel or choose New Keyword from the panel menu. A new default keyword name appears in the panel. To create the new keyword, type over the default name and press Enter (Windows) or Return (Mac OS).

• To create a new keyword set, click the New Keyword Set button 📁 at the bottom of the panel or choose New Keyword Set from the panel menu. A new default keyword set name appears in the panel. To create the new keyword set, type over the default name and press Enter (Windows) or Return (Mac OS).

• To rename a keyword or keyword set, select the keyword or keyword set and choose Rename from the panel menu. Then, type over the name in the panel and press Enter (Windows) or Return (Mac OS).

Note: When you rename a keyword, the keyword's name isn't changed in files that currently contain it. The original name stays in the file.

• To move a keyword to a different keyword set, drag the keyword from one set to another.

• To delete a keyword, select the keyword by clicking its name, and then click the Delete Keyword button 🗑 at the bottom of the panel or choose Delete from the panel menu.

Note: Keywords that you get from other users appear in the Other Keywords category until you recategorize them. To make these keywords permanent in Bridge, select the keyword and then choose Persistent from the context menu.

• To find a file using the keyword, choose Find from the panel menu.

Note: You can't modify keywords in search results for Adobe Stock Photos.

See also

Adobe Stock Photos

About Adobe Stock Photos

Adobe Stock Photos lets you view, try, and buy royalty-free images from leading stock libraries. With Adobe Stock Photos, you won't have to interrupt your design process to find quality images. Instead, from inside your favorite applications, you can use the powerful search capabilities of Adobe Stock Photos to find and download images.

From Bridge, the Favorites pane gives you quick access to these stock images. With your computer connected to the Internet, simply click the Adobe Stock Photos icon to start browsing thousands of available images. Because of the tight integration between Stock Photos and Adobe applications, you can download images from Adobe Stock Photos directly into many Adobe applications.

In the design process, you need the flexibility to try different images before deciding which one you want. Adobe Stock Photos gives you the option to download low-resolution, complimentary (comp) versions of images you're considering. You can work with the comps until you make your final decision, at which point you can purchase and download a high-resolution image.

For maximum convenience, you can open an account with Adobe. The benefit of opening an account is that you enter your personal information only once, greatly simplifying the checkout process. You can also look back at previous purchases, and even download photos again after you purchase them.

See also

"About comp images" on page 59

"Benefits of Stock Photos accounts" on page 61

"Buying stock photos" on page 59

Searching for images in Adobe Stock Photos

There are a few ways to search for images in Stock Photos. If you need help getting a project started, a broad search may yield a fund of possibilities and suggest areas to explore. If you have a clear idea of what you need, then you can use Advanced Search to narrow the field.

Related keywords also help you find photos. After you find photos, you can start a new search by selecting one or more related keywords. Each image is associated with keywords that help you find similar images. The more keywords you select, the narrower the search results.

Photos matching the search criteria appear as thumbnails in the main Bridge window. You can resize the thumbnail by dragging the Thumbnail slider at the bottom of the screen. When you click an image in search results, a low-resolution comp image appears in the Preview pane (it may take several seconds for the image to appear in the pane). To enlarge the comp, simply resize the Preview pane. You can view metadata information about the image in the Metadata pane under Adobe Stock Photos Metadata.

Your previous searches are automatically saved in Previous Photos in the Favorites pane. Click Previous Searches to display the list. To see the search results, double-click a search. To delete a search, select it and press the Delete key (Windows), right-click the search and then choose Send To Recycle Bin (Windows), or Control-click the search and choose Move To Trash (Mac OS).

All thumbnails from recent searches are saved on your computer. Having the thumbnails available offline is helpful if you want to browse through the images when your computer isn't connected to the Internet. However, the thumbnails do take up some space on your hard drive. At some point, if you want to delete these thumbnails, delete the searches (as described above), or remove them manually from the default file location: My Documents/AdobeStockPhotos/Previous Searches (Windows), or Documents/AdobeStockPhotos/Previous Searches (Mac OS).

See also

"To adjust the Bridge window" on page 42

"To view file and folder thumbnails in Bridge" on page 45

To search for stock photos

1 In Bridge, click Adobe Stock Photos in the Favorites pane.

2 In the text box at the top of the screen, type the word or phrase that describes the subject of the photos you want to search for.

3 Click the Search button 🔍 or press Enter.

Images matching the search criteria are displayed in batches. (There is a preference for changing the number of images displayed in a batch.) To view more images, click More Results.

See also

"Search tips for stock photos" on page 58

"To view image price and keywords" on page 58

To use Advanced Search

Advanced Search is a powerful tool that helps you find exactly the right photo. You can combine several search criteria to narrow your results.

1 In Bridge, click Adobe Stock Photos in the Favorites pane.

2 Click the Advanced Search button 🔍.

3 Search using any combination of the following options:

• Type a descriptive keyword or keywords in the text box to find related images. Alternatively, type an image ID, if you know the ID of the photo you want to use.

• To restrict searches to a specific media type, choose one or more options under Media Types.

• To search by the orientation of the photo, select the acceptable shapes under Orientation.

• Select the name of one or more providers to limit the search.

4 Click the Search button to display images matching the search criteria.

See also

"Search tips for stock photos" on page 58

To search with related keywords

1 In Bridge, click Adobe Stock Photos from the Favorites pane.

2 In the text box at the top of the screen, type the word or phrase that describes the subject of the photos you want to search for.

3 In the search results, click a photo to select it.

4 Do one of the following:

• Click the Get Price & Keywords button.

• Right-click the image (Windows) and choose Get Price & Keywords from the menu.

5 When the Price & Keywords dialog box appears, select keywords under Keywords For This Image. The more keywords you select, the narrower the search.

6 When you finish selecting keywords, click the Search Again button to begin a new search using the keywords.

To view image price and keywords

You can view size and price information, as well as related keywords, in the Image Detail dialog box.

1 In the search results window, click an image to select it.

2 Do one of the following:

• Click the Get Price & Keywords button.

• Right-click the image (Windows) and choose Get Price & Keywords from the menu.

3 To close the dialog box, click the Close button.

Note: The currency displayed in the Price & Keywords dialog box may not be the native currency of your billing country; it is the supported currency for purchases made from your country. When you purchase photos from Adobe Stock Photos, your credit card will be billed in the supported currency.

Search tips for stock photos

Here are some helpful pointers for refining your searches:

Misspelled words Double-check your search entries to make sure they're spelled correctly.

Trademarked names Brand names may not return full search results. Instead, search for the item by its general name.

Exact phrase searches To view images that exactly match a phrase, type the whole phrase in the Search text box. You can enter Boolean operators such AND, OR, or NOT to narrow your search.

Search by subject To search for a specific subject, use nouns that describe the main subject of a photo, such as "bicycle" or "house," as well as adjectives that modify the nouns, such as "vintage" or "red." To narrow the search further, use verbs that describe an action in the photo.

Search by concept Try searching with concepts, or perceptions, such as "romance," "vitality," "frustration," or "excitement," to find an inspiring image.

Search by style To find photos that reflect a specific photographic or artistic technique, try searching on terms such as "profile", "studio shot," or "clipping path."

Comp images

About comp images

Comp images are free, nonwatermarked, low-resolution versions of stock photos that you can download. You can use comps to capture a feeling, idea, or concept before choosing the final image for a project. Comps are not licensed for production, but you can use them in mock-ups or other preliminary work. Because comps are low-resolution images, they're not suitable for printing or publishing. After an evaluation period, you can purchase a high-resolution version of the image to continue working with the photo.

Metadata is bundled with comp images. This metadata is used in Adobe applications to recognize images as stock photos, even if you rename them. You can purchase high-resolution versions of the images later, even after you move a comp to a project folder or create other versions of the image.

You can view your downloaded comps by clicking Downloaded Comps in the Favorites pane, or you can navigate to the default folder where comps are saved: My Documents/AdobeStockPhotos (Windows) or Documents/Adobe-StockPhotos (Mac OS). You can move downloaded comps to any folder you want. To delete a comp in the Stock Photos window, right-click it and then choose Send To Recycle Bin (Windows) or Control-click it and choose Move To Trash (Mac OS).

For more information on using comps, see the terms of service (TOS), which describe when and for how long you can use a comp. A Terms Of Service link is available on the main Adobe Stock Photos screen.

To download comps from Adobe Stock Photos

1 In the search results, click a photo to select it.

2 Do one of the following:

• Click the Download Comp button.

• Right-click the photo (Windows) and select Download Comp from the menu.

• Click Get Prices & Keywords and select Free Comp Image in the dialog box. Click the icon to download the comp.

To view saved comps in Stock Photos

To help you keep track of downloaded comps, you can view them in Bridge. If you decide to purchase a comp, put the comp in your shopping cart.

1 In the Favorites pane, click Adobe Stock Photos.

2 Click Downloaded Comps to see the comps.

Buying stock photos

Buying stock photos

It's simple to buy images through Adobe Stock Photos. When you find the photos you want to buy, put them in your *shopping cart*. The photos remain in your cart until you're ready to complete your purchase. When you finish browsing, you can check out and have your images automatically downloaded to your computer.

Having an account with Adobe speeds the checkout process. Because your contact and billing information is saved, you can complete your purchase with just a few clicks.

Adobe Stock Photos maintains a secure site, and you can rest assured that your personal information is kept in strict confidence. Any information you enter is used only for Adobe Stock Photos purposes.

To view your photos, click Purchased Images in the Favorites pane, or navigate to the default Stock Photos folder: My Documents/AdobeStockPhotos (Windows) or Documents/AdobeStockPhotos (Mac OS).

See also

"To buy photos" on page 60

To place photos in the shopping cart

As you find photos you want to purchase, add them to the shopping cart until you're ready to check out.

1 In the search results window, right-click (Windows) or Control-click (Mac OS) a photo, and then choose Add To Cart from the context menu. You see a dialog box confirming that the photo is your shopping cart.

2 Click OK to continue, or click View Shopping Cart to see the contents of your cart.

If you want to disable this dialog box, select Don't Show Again.

To buy photos

1 To access your shopping cart, click the Shopping Cart icon.

2 Choose a resolution for the photos you want to buy. (You can remove an item from the shopping cart at any time by clicking the Delete icon 🗑 .)

3 Click Check Out.

4 Do one of the following:

• If you have an Adobe account, enter your ID and password.

• If you want to open an Adobe account, click Set Up An Account. You are prompted to enter your billing and account information.

• If you want to buy the images without an account, click Continue As Guest. You are prompted to enter your billing information. Click Continue.

5 Do one of the following:

• If you have an Adobe account, confirm your billing information and click Continue.

• If you don't have an Adobe account, enter your billing information and click Continue.

6 In the Order Summary page, confirm your choices. To delete a photo from the shopping cart, click the Delete icon.

7 If you have a promotion code, enter it in the Promotion Code text box and click Apply. You see any changes made to your order as a result of applying the promotion code.

8 Click the check box to accept the terms of the Adobe Stock Photos License Agreement (click the blue text to read the agreement).

9 Finally, click the Purchase Now button to complete the checkout process. Your purchase is processed, then you're prompted to download your photos.

10 Click Start Download. After the photos are saved, click View Purchased Images if you want to start working with them right away.

11 To view the receipt for your purchase, in the Thank You page click View Receipt. You can also monitor the progress of the download by clicking Open Download Status. When you finish, click Find More Images if you want to find new photos, or click Go To Your Account.

If you have been working with a comp version of the image you purchased, you need to replace the comp with the high-resolution image in your art.

Note: To delete the list of high-resolution images waiting for download from the Download Status screen, choose Edit > Preferences (Windows) or Bridge > Preferences (Mac OS). Select Adobe Stock Photos, and then click the Clear Now button.

See also

"To create a Stock Photos account" on page 62

"To set Adobe Stock Photos preferences" on page 64

To view order details

A benefit of having an Adobe account is that you can go back and view your previous orders.

1 In Adobe Stock Photos, click the Your Account button 👤 .

2 In the Your Account page, click View Order History.

3 The Your Order History page shows all of your previous orders. To view details about a particular order, click the order number (highlighted in blue).

4 In the Order Detail page, you can see the billing information, as well as a description of the photos you purchased. Click Return To Your Account if you're done, or click Return To Order History if you want to review other orders.

You can also redownload the photos you purchased.

Stock Photos Accounts

Benefits of Stock Photos accounts

Creating an Adobe account makes purchasing photos quick and easy. When you log in with your e-mail address and password, you can work with your account in several ways:

Manage your profile After you complete the registration process, modify your account information anytime by clicking the Your Account link in the navigation bar.

See your order history Track orders made through Adobe Creative Suite Stock Photos to check the specific items ordered, the total cost of the purchase, or the order date.

Download previously purchased items again Access your order history and click Re-download to replace a lost or corrupted file for up to one year from the original purchase date.

Shop with ease Purchase photos without providing profile information. Adobe Stock Photos automatically enters your name and address when you make any purchases. All your personal information is securely stored.

To create a Stock Photos account

1 In Adobe Stock Photos, do one of the following:

• Click the Your Account button 👤 , and then click the Continue button under Set Up An Account.

• If you have photos in the shopping cart, click the Shopping Cart icon, and then click Checkout. Click Set Up An Account.

2 If you haven't chosen your billing country, you see a dialog box with a list of countries. Choose the country of your billing address and click Continue.

3 In the text boxes, type your e-mail address and choose a password (at least six characters long and containing a mix of letters and numbers).

4 Enter your billing address, and then type your payment information. The billing address must exactly match the address where your credit card statements are mailed.

5 When you finish, click Continue.

After you create your account, Adobe Stock Photos sends a confirmation e-mail to the address you entered.

To log into your Stock Photos Account

1 In Adobe Stock Photos, click the Your Account button 👤 .

2 When prompted, type your e-mail address and password, and then click Continue. If your login is successful, the Your Account page appears.

If you're having trouble logging into your account, make sure that you have spelled your e-mail address and password correctly. Also make sure that you haven't pressed the Caps Lock or Number Lock keys.

To edit your Stock Photos account profile

Your account profile includes your name and password settings.

1 Click the Your Account button 👤 .

2 Log into your account.

3 In the Your Account page, click Edit Your Profile. Do any of the following:

• To change your password, type a new word in the Password text box. Passwords can contain only letters and numbers and must be at least six characters long.

• To sign up to get e-mail from Adobe Stock Photos about promotions or other special information, select the check box.

4 To confirm your changes, click Save. To go back to the main Your Account page without saving changes, click Return To Your Account.

To change Stock Photos account address information

You can change your default billing address or add other addresses. Make sure that any new addresses match the address on your credit card billing statements exactly to avoid any problems.

1 Click the Your Account button 👤 .

2 Log into your account.

3 In the Your Account page, click Edit Your Address.

4 Do any of the following:

• To change the nickname associated with the default address, type a new name in the Billing Address Nickname text box.

• Type any changes to the default address in the text boxes.

• To add a new address to your account, click Add New Address, and then enter the information in the text boxes.

• To edit a non-default address, click Edit under the address, and make any changes.

• To make an address the default, click Set Default under the address.

• To delete an address, click Delete under the address.

5 To confirm your changes, click Save. To go back to the main Your Account page without saving changes, click Return To Your Account.

To change Stock Photos account payment information

You can change your saved credit card information or add additional credit cards. Enter your credit card number without spaces or dashes. You can give each credit card a nickname to keep track of which card you're using.

1 Click the Your Account button ♟ .

2 Log into your account.

3 In the Your Account page, click Edit Your Payment Information.

4 Do any of the following:

• To change the nickname of the default credit card, type a new name in the Payment Nickname text box.

• To change the default credit card number, type the new number in the Credit Card Number text box, and then choose the expiration date for the new card from the month and year menus.

• To add a new card to your account, click Add New Payment Method, and then type a nickname and the card number. Enter the expiration date.

• To delete a payment method, click Delete under the payment nickname.

5 To confirm your changes, click Save. To go back to the main Your Account page without saving changes, click Return To Your Account.

To download previously purchased images from Stock Photos

To download previously purchased images, you need to have a Stock Photos Account. You can download images onto a different computer than the one you used to purchase the photos originally (see the license agreement for information about restrictions).

1 Click the Your Account button ♟ .

2 In the Your Account page, click View Order History.

3 In the Your Order History page, click the order number (highlighted in blue) of the photo you want to download again.

4 In the Order Detail page, click the arrow under Download. The photo is downloaded. By default, purchased images are located at My Documents/AdobeStockPhotos/Purchased Images (Windows) or Documents/Adobe-StockPhotos/Purchased Images (Mac OS).

To set Adobe Stock Photos preferences

1 In Adobe Bridge, choose Edit > Preferences (Windows) or Bridge > Preferences (Mac OS).

2 Select Adobe Stock Photos from the list on the left.

3 Set any of the following preferences, and then click OK:

Thumbnails Per Search Group To set how many thumbnail images are displayed in a search group, choose an option from the Thumbnails Per Search Group menu.

Search language To search using a different language, select the language from the Search Language menu. Note that you get the best results from most providers if you search in English. This setting doesn't affect the interface display language.

Destination folder for downloads To select a new default folder in which to store photos, downloaded comps, and purchased photos, click Change Location. Click Reset to restore the default location.

Billing Country Or Region To change your default billing country, choose the name of the country from the Billing Country menu. The currency displayed next to the Billing Country menu may not be the native currency of that country (not all currencies are supported). Instead, it's the currency Adobe allows for that country. Your credit card is billed in the supported currency.

Alert messages To enable or disable the messages that appear when you download a comp or add a photo to your shopping cart, select or deselect Display Message After Downloading Comp or Display Message After Adding Image To Shopping Cart.

Automatic downloading to default folder To save your photos automatically to your default folder, select Auto-Download Images After Purchasing Them. Deselect this option if you want to choose a location in which to save the photos (for example, in a Version Cue project or other project-specific folder on your computer).

Downloading after lost connection To resume downloading automatically after a connection is lost, select Resume Interrupted Downloads When Bridge Starts.

Chapter 5: Capturing, digitizing, and importing

Collecting assets

About capturing, digitizing, and importing

To bring media files (assets) into an Adobe Premiere Pro project, you can capture, digitize, or import them, depending on the type of source material:

Capture You capture digital video files from tape. That is, you transfer them from the source videotape to the hard drive. All digital camcorders and decks record video in digital formats, but it must be captured (transferred to disk) before Adobe Premiere Pro can use it in a project. Adobe Premiere Pro's capture function, in conjunction with a digital port or capture card (for example, IEEE 1394 or SDI), can capture digital video from tape and save it to disk as files that you can then add to your project.

Digitize You digitize analog video. Analog video is recorded by analog camcorders and decks. The data must be digitized (converted to digital form) before a computer can store and process it. Adobe Premiere Pro's capture function, in conjunction with a digitizer card—or a device that can convert analog video to digital—can convert analog video to digital files readable by Adobe Premiere Pro.

Import Use the Import command to bring files—for example, still images or audio you've downloaded—that are already on your hard drive into your Adobe Premiere Pro project. Adobe Premiere Pro lets you import numerous types of digital files.

Capture panel

Use the Capture panel (choose File > Capture) to capture digital or analog video and audio. This panel includes a preview, which displays video being captured, controls for recording with or without device control, a Settings pane for editing your capture settings, and a Logging pane for logging clips for batch capturing. For convenience, some options available in the Capture panel are also available in the Capture panel menu.

You can control certain source devices, such as camcorders and decks, directly from the Capture panel, provided your computer has an Adobe Premiere Pro-compatible IEEE1394, RS-232, RS-422, LANC, or Control-M controller. If your source device lacks any of these interfaces, you still use the Capture panel, but you must cue, start, and stop your source device using its controls.

Note: When not capturing in Adobe Premiere Pro, close the Capture panel. The Capture panel assumes primary focus, so leaving it open while editing or previewing video disables output to the source device and may decrease performance.
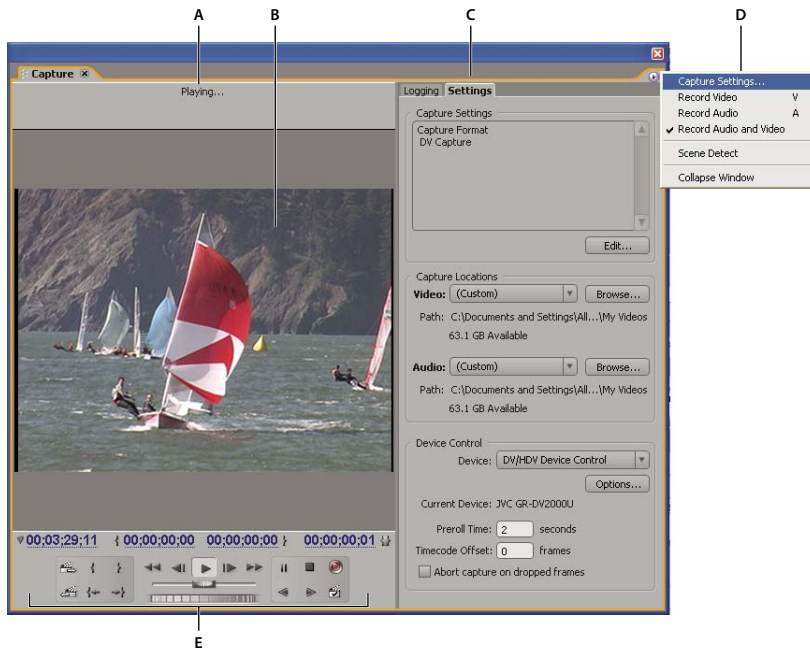
Capture panel
A. Status area B. Preview C. Tabs D. Panel menu E. Device controls

To set the capture format

1 With a project open, choose Project > Project Settings > Capture.

2 From the Capture Format menu, choose the settings that match your source material.

To set capture preferences

1 Choose Edit > Preferences > Capture.

2 Specify whether you want to cancel capture on dropped frames, report dropped frames, or generate a batch log file.

3 Select whether to use device control timecode. If a device controller is in use (for example, for RS-422/232 or LANC-controlled devices), the last selection enables Adobe Premiere Pro to record the timecode supplied by the controller instead of attempting to record any timecode that might be written to the source tape.

File size limits

Adobe Premiere Pro does not limit the size of files. However, your capture card, operating system, or hard disk may set such a limit. Check your capture card and hard disk documentation for information on support of large files.

The format of your hard disk greatly affects its ability to handle large files. FAT32 formatting limits each file to 4 GB, or about 18 minutes of DV footage. NTFS formatting doesn't limit file size, although files are still subject to limitations that may be imposed by other components of your video-editing system. This is why it is best to use NTFS-formatted disks as the scratch disks where you capture video and for the target drives where you export video files.

Supported file formats for import

Adobe Premiere Pro can import a number of video and audio formats. It also supports 10-bit color depth, necessary for editing standard and high-definition footage.

File format support is provided by plug-in software modules. Most of these software modules are installed automatically with Adobe Premiere Pro.

Supported video and animation file formats

You can import any of the following types of video and animation files:

• ASF

• Type 2 AVI

• MPEG, MPE, MPG, M2V

• QuickTime (MOV; requires QuickTime player)

• DLX

• Windows Media File (WMV)

• Animated GIF

• Filmstrip (FLM)

Note: Type 1 AVI clips must be rendered before they can be previewed from a DV device. To render a Type 1 AVI clip, add it to a sequence in a DV project, and build a preview file of that section of the Timeline panel.

Supported audio file formats

You can import any of the following types of audio files:

• Audio Interchange File Format (AIFF)

• AVI

• MP3,

• MPEG, MPG

• QuickTime (MOV; requires QuickTime player)

• WAVE (WAV)

• WMA

Supported still-image file formats

You can import any of the following types of still-image files:

• Adobe Illustrator (AI)

• Adobe Photoshop (PSD)

• Bitmap (BMP, DIB, RLE)

• EPS

• GIF

• ICO

• JPEG, JPE, JPG, JFIF

• PCX

- PICT, PIC, PCT

- Portable Network Graphics (PNG)

- PTL, PRTL (Adobe Title Designer)

- Targa (TGA, ICB, VDA, VST)

- TIFF

- PSQ

Note: You can import layered Illustrator and Photoshop files as sequences.

Supported video project file formats

You can import any of the following types of video project files:

- Adobe Premiere 6.0 or 6.5 (PPJ)

- Adobe Premiere Pro (PRPROJ)

- Advanced Authoring Format (AAF)

- After Effects Project (AEP)

- EDL

- PLB

See also

Device control

About device control

You can use Adobe Premiere Pro's device control to simplify and automate video capture and to export sequences to tape. Device control lets you precisely control devices, such as decks and camcorders, with capture and batch capture controls. With device control, you can use the Capture panel to log each clip and then use the Batch Capture command to record logged clips automatically.

Adobe Premiere Pro controls devices through its built-in support of IEEE 1394 and its support of compatible RS-232, RS-422, LANC, and Control-M controllers. Regardless of type, if your device isn't automatically recognized, you need to set it up. Before setting up device control, make sure that you have a tape deck or camcorder that supports external device control and a cable that connects the device to your controller, computer, or both.

To set up a project for device control

Some device control settings are available when you choose Edit > Preferences > Device Control, and others are in the Device Control section at the bottom of the Settings pane of the Capture panel. Device control settings apply to the entire project.

1 Choose Edit > Preferences > Capture.

2 Select one or more of the Capture options. If you are using a device controller that generates its own timecode (for example, a LANC controller for a Hi8 camcorder), select Use Device Control Timecode. This replaces the unreadable timecode recorded on the tape with the controller's timecode. Click OK.

3 If you want captured clips to be saved to a specific bin in a project, make sure that the project is open and that the bin exists in the Project panel.

4 Choose File > Capture.

5 In the Settings pane, click Edit to verify that the capture settings are appropriate for your device.

6 Click Save to save a group of project settings. Click OK when you've selected the correct settings for your device.

7 In the Capture Locations section of the Settings pane, make sure that the drives you designate for captured video and audio have sufficient free space. If you want to change the locations, choose Custom from the Video or Audio menu, click the corresponding Browse button, set the location, and click OK.

8 In the Device Control section, if device control has not been set up, choose a device from the Devices menu and click Options to set it up. Options vary depending on the device; see the documentation for your device driver.

9 Test the device control buttons in the Capture panel to verify that they work and that you see video in the preview.

10 Click Logging. In the Setup area, make sure that the Capture menu setting is correct, and select a bin from the list if needed. If no bin is selected or the bin list is empty, captured clips appear in the Project panel.

11 Enter information into the Clip Data area as needed.

Note: To avoid confusion, make sure that the tape name is unique. Some types of device control software may ask you to specify the Tape Name setting each time you insert a new tape. The other Logging Data options aren't required.

To set up a device for device control

Adobe Premiere Pro supports the control of devices such as camcorders and VTRs. It controls DV and HDV devices by way of IEEE 1394 connections and serially controlled devices by way of RS-232, RS-422, LANC, or Control-M controllers installed on a given computer.

1 Open the Device Control Preferences dialog box by doing one of the following:

• Choose Edit > Preferences > Device Control.

• In the Capture panel, click Settings.

2 Select the type of device you want to control from the Devices pop-up menu.

3 Click Options, and do one of the following:

• If you are connecting a DV or SDI device, select the device brand and device type. If your particular device is not listed, click Go Online For Device Info.

• If you are connecting a serial device, specify Protocol, Port, Time Source, and Time Base settings.

4 In the Device Control Options dialog box, check the status display:

Offline Adobe Premiere Pro does not see your device, and you need to check all your connections and settings.

Detected Adobe Premiere Pro sees your device but cannot control the tape (possibly because there is no tape inserted).

Online Adobe Premiere Pro sees your device and can control the tape. Click OK.

5 In the Device Control section of the Settings pane, specify the following options as needed:

Preroll Time Indicates how much before the In point Adobe Premiere Pro starts playing the tape before capture. The appropriate value varies depending on the device you are using.

Timecode Offset Indicates the number of frames to adjust the timecode embedded in the captured video so that it corresponds with the timecode number of the same frame on the source tape.

To calibrate an RS-422 or RS-232 device

1 Select File > Export > Export To Tape.

2 Click Options.

3 Enter the number of offset frames, as appropriate for your device, to the Delay Movie Start, Manual Edit Timing, and Preroll boxes.

To control an RS-422 or RS-232 device

1 Select Edit > Preferences > Device Control.

2 From the Devices menu, select Serial Device Control.

3 Click Options.

4 In the VTR And Port Control section, select a protocol and port for your device.

5 In the Time Control section, select a time source and timebase for your device.

Device controls in the Capture panel

You can use the controls in the Capture panel to operate the device as you log clips. The jog control �(jog control image) lets you navigate quickly to nearby frames, and the shuttle control �(shuttle control image) lets you change the speed of the tape as you play it forward or backward. The Record button ⏺ lets you begin a manual capture.

If you press the Rewind button ◀◀ when the tape is stopped, the device rewinds the tape at full speed. If you rewind when the tape is playing or paused, the device rewinds while displaying video in the preview.

If you press the Fast Forward button ▶▶ when the tape is stopped, the device moves the tape forward at full speed. If you fast forward when the tape is playing or paused, the device moves the tape forward while displaying video in the preview.

If you press the Previous Scene ▦ button, the tape shuttles to the previous start point and pauses. If you press the Next Scene ▦ button, the tape shuttles to the start point of the next scene and pauses.

You can also press the J, K, and L keys to control your device. J rewinds the tape; L fast forwards it, and K pauses it. The speed of forward or reverse increases each time you press J or L. To rewind or forward one frame at a time, hold down K and press J or L once. To slowly rewind or forward, hold down K+J or K+L.

💡 *To operate Capture panel controls using the keyboard, see the tool tips in the Capture panel. You can change the shortcuts by choosing Edit > Keyboard Customization. You can also shuttle to a tape location by typing its timecode into the Capture Panel's In Point or Out Point timecode display and pressing Enter.*

Capturing and digitizing

System requirements for capturing

To capture digital video footage, your editing system needs the following components:

• For DV or HDV footage, either an OHCI-compliant IEEE 1394 (FireWire, iLink) port or capture card, or a non-OHCI-compliant IEEE 1394 capture card with presets, drivers, and plug-ins written specifically for Adobe Premiere Pro.

• For HD footage, an Adobe Premiere Pro-compliant HD capture card with an SDI input. Adobe Premiere Pro natively supports the AJA HD SDI card.

• A codec (compressor/decompressor) for the type of data you need to capture. Adobe Premiere Pro has its own codecs for importing DV and HDV footage. Plug-in software codecs are available for other types. Hardware codecs are built into some capture cards.

• A hard disk capable of sustaining the data rate of the type of digital video you need to capture.

• Sufficient disk space for the captured footage. The length of a captured clip may be limited by your operating system.

• A project that was created using a preset in the New Project dialog box in which all settings match the footage you plan to capture.

Note: Some DV and HDV camcorders require a connection to their power adapters to activate their IEEE 1394 ports. Other camcorders may go into sleep mode or demo mode if left in the camera mode without tape activity for a period of time. To avoid these problems, connect your camcorder to its power adapter when setting it up for capturing or dubbing video. If the camcorder goes into demo mode with the power adapter connected, turn off this feature using the camcorder's menu system.

To prepare for digital video capture

1 After connecting the digital device to your computer using an IEEE 1394 or SDI connection, turn the device on, and do one of the following:

• If it's a camera, set it to the playback mode, which may be labeled VTR or VCR.

• If it's a deck, make sure that its output is set properly.

Note: Don't set a camera to any of the recording modes, which may be labeled Camera or Movie.

2 Start Adobe Premiere Pro. When the Welcome screen appears, do one of the following:

• Click New Project, select the desired preset from the Load Preset panel, and click OK.

• Select an existing project. The project must use a preset that matches the video and audio settings of the footage you're going to capture.

3 Choose Edit > Preferences > Scratch Disks, and specify the locations for Captured Video and Captured Audio.

Note: Adobe Premiere Pro supports high bit-depth (greater than 8-bit) video necessary for editing standard and high definition footage.

To capture without device control

If you do not have a device that can be controlled by Adobe Premiere Pro, you can capture video manually. You have to operate both the playback device controls and the Capture panel controls in Adobe Premiere Pro.

1 Make sure that the deck or camcorder is properly connected to your computer.

2 Choose File > Capture.

3 In the Setup area of the Logging pane, choose your media type from the Capture pop-up menu.

4 Use the controls on the deck or camcorder to move the videotape to a point several seconds before the frame where you want to begin capturing.

5 Press the Play button on the deck or camcorder, and then click the red Record button in the Capture panel.

6 Record a few seconds beyond the end of the footage you need, to provide room for editing. Press the Esc key to stop recording.

When the Save Captured File dialog box appears, enter logging data and click OK. The new file is listed in the Project panel and is saved to the disk location specified in the Settings pane of the Capture panel.

Capturing with device control

When a device and the project are set up properly, you can begin capturing clips using device control. You can capture an entire tape or you can mark In and Out points for each clip, and then capture the clip. You can log In and Out points for any number of clips and have Adobe Premiere Pro capture as many as you like in a batch.

To capture an entire tape

1 In the Capture panel, make sure that your device is online, as indicated above the preview.

2 Insert a tape into your device. Adobe Premiere Pro prompts you to name the tape. Be sure not to give any two tapes the same name.

Including a unique number in the name can help you avoid using the same name twice.

3 In the Setup area of the Logging pane, choose your media type from the Capture pop-up menu.

4 Rewind the tape to its beginning.

5 If you want to create a separate file for each new scene on the tape, select Scene Detect in the Capture area.

6 If you want to capture some frames extending beyond the In and Out points of each clip, enter that number of frames in the Handles box in the Capture area.

7 Click the Tape button.

To select and capture a clip

1 In the Capture panel, make sure that your device is online, as indicated above the preview.

2 Insert a tape into your device. Adobe Premiere Pro prompts you to name the tape. Be sure not to give any two tapes the same name.

3 In the Setup area of the Logging pane, choose your media type from the Capture pop-up menu.

4 Use the controls in the Capture panel to move to the first frame you want to capture, and click the Set In button. Then move to the last frame you want to capture, and click the Set Out button.

5 If you want to capture some frames extending beyond the In and Out points of each clip, enter the number of frames for these handles in the Handles setting of the Capture section.

6 Click the In/Out button in the Capture area of the Logging pane to capture the clip you've identified.

See also

To use automatic scene detection

Instead of manually logging In and Out points, you can use the Scene Detect feature. Scene Detect analyzes the video for scene breaks as indicated by the tape's Time/Date stamp, such as those caused when you press the camera's pause button while recording. When Scene Detect is on and you perform a capture, Adobe Premiere Pro automatically captures a separate file at each scene break it detects. Scene Detect works whether you are capturing an entire tape or just a section between specific In and Out points. If you turn on Scene Detect and capture using In and Out points, Scene Detect may break up clips between the defined In and Out points if a scene break is detected.

Scene Detect logs scenes for batch capturing without altering the tape's progress. It also logs scenes that occur across timecode breaks.

❖ In the Capture panel, do either of the following:

• Click the Scene Detect button ⬚ below the image.

• Select Scene Detect in the Capture area of the Logging pane.

Common capture issues

If you run into problems while capturing digital footage, refer to Adobe Premiere Pro Help or the documentation for your camera, deck, or capture card. You can also check the Adobe website for technical support. The following are common issues that may arise when you capture digital video:

• If your device (camera or deck) goes into sleep mode, close and then reopen the Capture panel; or close the Capture panel, turn the device off and back on, and then reopen the Capture panel. You can disable sleep mode on many cameras by connecting them to AC power and ejecting the tape.

• If video looks grainy in the Capture panel or Monitor panel, Adobe Premiere Pro may have decreased display quality to preserve capture quality. Video is captured and stored at the quality you determine and always plays at that quality on an NTSC or PAL monitor. On slower systems, Adobe Premiere Pro may lower the quality of the capture preview in order to ensure that sufficient CPU resources are available for full-quality capture.

• If the video image does not appear in the Capture panel, verify your device control and capture settings. Then, leaving the device on, restart Adobe Premiere Pro.

• If captured audio and video are not in sync, make sure that sections of tape weren't skipped (left unrecorded) between shots. Blank tape areas lack timecode, which may cause interruptions in the camera time mode. When you capture the blank area, the camera doesn't transmit valid frames, but time continues to be marked.

• If no audio is recording, try playing a source through the computer's sound input and speaker system without recording. If you can't hear it, the audio source may not be connected properly or audio parameters may not be set properly. Check hardware connections, Sounds And Audio Devices in the Windows Control Panel, and mixer settings, and refer to the documentation for your sound card. In Adobe Premiere Pro, select Edit > Preferences, and check the settings for Audio, Audio Hardware, and Audio Output Mapping.

To determine if your device is online

1 Select File > Capture.

2 In the Device Control area of the Settings pane, click Options.

3 In the Options dialog box, click Check Status.

Digitizing analog video

In order to edit video shot in an analog format, you must first digitize it. You can digitize it by routing the video signal through either a digital camcorder that can digitize on the fly or a digitizing device installed in your computer. Alternatively, you can dub the analog footage to a digital format, and then capture the video from a digital device through a capture card as any other digital source. Depending on your equipment, you may be able to digitize analog video from any of several signal types, including component video, composite video, and S-video. Some digitizers provide device control. They connect to your source device through RS-232, RS-422, LANC, or Control-M jacks, enabling you to control the device through Adobe Premiere Pro's Capture panel and to perform batch capturing. Refer to the instructions included with your camcorder and digitizer/capture card.
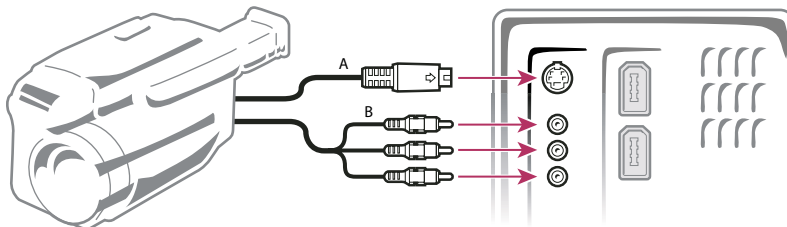
Analog video connections
A. *S-video connection* ***B.*** *Composite video and left-right audio connections*

About capture card settings

Some of the capture settings you see in Adobe Premiere Pro may be from the plug-in software that came with your digitizer/capture card. Because of the differences among brands of cards, specific options and supported formats can vary. This complex relationship between video-capture cards and Adobe Premiere Pro can make it difficult to identify which part of the system is responsible for a particular option or problem. Adobe, as well as most capture card manufacturers, provides troubleshooting documents online that can help you determine whether an option or problem is related to the video-capture card and its software or to Adobe Premiere Pro. Check the Adobe Premiere Pro website and the capture card manufacturer's website for troubleshooting resources.

Most of the supported capture cards install a settings file (preset) that you can select in the Adobe Premiere Pro New Project dialog box, in the Load Preset pane. This preset automatically sets all capture settings for optimal support of your capture card. For best results, use your capture card's preset, if provided, and don't change the capture settings in the Custom Settings pane.

To digitize analog video

1 Quit Adobe Premiere Pro.

2 Connect your analog device's video and audio outputs to your digital device's (digitizer, digital camcorder or digital deck) analog inputs.

3 If the digital device is an external digitizer, deck, or camcorder, connect its digital output (IEEE 1394 or SDI) to the computer's digital port of the same type.

4 If the digital device is a digitizer with device controls, connect its device control port (RS-232, RS-422, LANC, or Control-M) with the analog device's port.

5 Turn on both devices.

6 If the digital device is a camcorder, put it into VTR or VCR (not Camera) mode.

7 Set the input selection control on the digital device to the correct analog input.

8 Start Adobe Premiere Pro.

9 When the Welcome screen appears, do one of the following:

• Click New Project, select the capture card's preset (if available) from the Load Preset pane, and click OK.

• Select an existing project that was set up with the capture card's preset.

10 Select File > Capture.

11 In the Capture panel, carefully check the settings on the Settings pane. If you need to change them, click Edit. (The settings in this dialog box are provided by the card manufacturer's plug-in software, not by Adobe Premiere Pro, and vary according to the analog capture card's brand and model. See the documentation for the software driver provided by the manufacturer of the capture card.)

12 Do one of the following:

• If the digital device offers no device control, cue up your source using the analog device's own controls. Press Play on the analog device and click the Record button ⏺ in the Capture panel.

• If the digital device offers device control, capture or log footage using the Capture panel's controls, as you would with a digital source.

💡 *To help determine the effects of your compression settings on the data rate of the captured video, use the Adobe Premiere Pro Data Rate graph.*

Digitizing analog audio

If you want to use audio that is not yet in digital form (for example, from an analog cassette or a live microphone), you need to digitize it through an audio or audio/video digitizer/capture card.

The quality of digitized audio and the size of the audio file depend on the *sample rate* (the number of samples per second) and *bit depth* (the number of bits per sample) of the digitized audio. Also, stereo audio requires twice as much disk space as mono audio. These parameters, controlled in the Capture Settings section of the Project Settings dialog box, determine how precisely the analog audio signal is represented in digital form. Higher sample rates and bit depths reproduce sound at higher levels of quality, but with correspondingly larger file sizes. Capture audio at the highest quality settings your computer can handle, even if those settings are higher than the settings you'll specify for final export or playback. This provides *headroom*, or extra data, that helps preserve quality when you adjust audio gain or apply audio effects such as equalization or dynamic range compression/expansion. Although the DV format can record two independent stereo audio pairs, Adobe Premiere Pro can capture only one stereo pair. It may be possible to select either stereo pair 1, stereo pair 2, or a mix of both stereo pairs, depending on the DV hardware you are using. Consult your DV equipment guide.

To set the location for captured audio

1 Choose Edit > Preferences > Scratch Disks.

2 For Captured Audio, select a location and click OK.

To record a voice-over

1 Connect the microphone to the mic-level input jack on your computer or sound card. If necessary, choose Edit > Preferences > Audio Hardware to configure the input device.

2 If you want to preview the Timeline panel as you record, position the current-time indicator in the Timeline panel a few seconds before the time when you want the voice-over to begin.

3 In the Audio Mixer, click the Record Enable button 🎤 for any tracks on which you want to record audio.
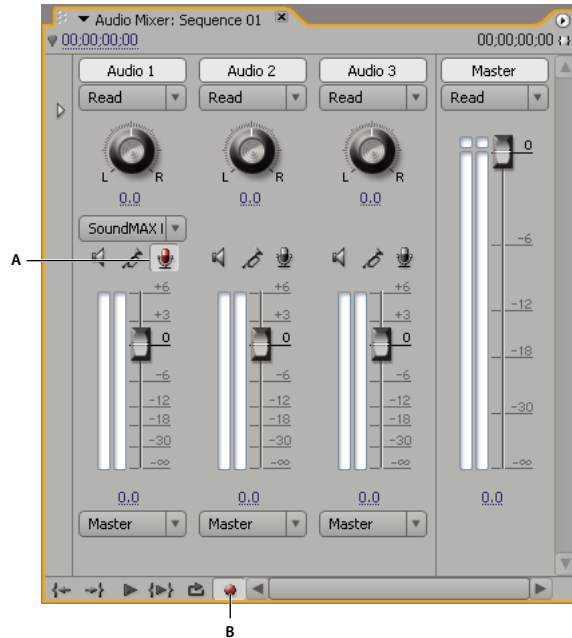
Audio Mixer recording controls
A. *Record Enable button for track* **B.** *Record button for Audio Mixer*

4 In the Audio Mixer, click the Record button for the sequence. Adobe Premiere Pro prepares the sequence for recording but moves the playhead only when you press the Play button.

5 Select Meter Input(s) Only in the Audio Mixer menu to meter only your sound card's inputs.

6 Test the input levels by speaking into the microphone.

7 When you finish testing, deselect Meter Input(s) Only to meter the project's audio tracks also.

8 Speak into the microphone again. Watch the Audio Mixer level meters to ensure that the input levels for record-enabled tracks are high but not clipping.

9 Click the Play button in the Audio Mixer, and then start speaking your voice-over.

See also

"About audio" on page 173

To record an analog source
You can record audio from an analog source device, such as a cassette deck or turntable.

1 Connect the analog source to the appropriate input jack on your computer or sound card. If necessary, choose Edit > Preferences > Audio Hardware to configure the input device.

2 If you want to preview the Timeline panel as you record, position the current-time indicator in the Timeline panel a few seconds before the time when you want the recording to begin.

3 In the Audio Mixer, click the Record Enable button 🎤 for any tracks on which you want to record audio.

4 In the Audio Mixer, click the Record button for the sequence. Adobe Premiere Pro prepares the sequence for recording but moves the playhead only when you press the Play button.

5 Select Meter Input(s) Only in the Audio Mixer panel menu to meter only your sound card's inputs.

6 Test the input levels by playing a selection from the analog source.

7 When you finish testing, deselect Meter Input(s) Only in the Audio Mixer panel menu to meter the project's audio tracks also.

8 Play a selection from the analog source again. Watch the Audio Mixer level meters to ensure that the input levels for record-enabled tracks are high but not clipping.

9 Click the Play button in the Audio Mixer, and then press Play on the source device.

See also

"About audio" on page 173
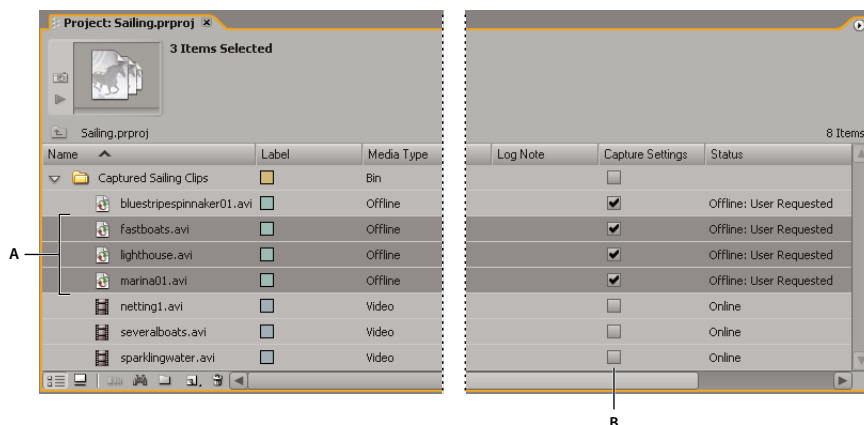
Batch capturing

About batch capturing

Adobe Premiere Pro supports batch capturing—automatic, unattended capture of multiple clips from a controllable device. You can define a batch by selecting a group of clips you have logged. These appear as offline (placeholder) clips in the Project panel or in a bin. You can capture any number of logged, offline clips by selecting them and choosing File > Batch Capture. When you begin capture, Adobe Premiere Pro automatically re-sorts entries by tape name and timecode In points so that they're captured as efficiently as possible.

To save time by reducing the number of clips you log manually, consider using Scene Detect. See "To use automatic scene detection" on page 73.

When you want to batch capture a set of logged (offline) clips, select them in the Project panel and choose File > Batch Capture. If you organized offline clips into bins, you can batch capture an entire bin by selecting the bin.

Adobe Premiere Pro can capture video in the background so that you can perform other tasks during capture. When you start either a manual capture or batch capturing in Adobe Premiere Pro, you can minimize the Adobe Premiere Pro application or switch to another application without stopping capture. After you restore the Adobe Premiere Pro window, you can click anywhere inside it to halt capture. However, be aware that frames may drop out if you perform a system-intensive task while capturing. The chance of dropped frames is lower on a high-performance system, such as one with dual processors.

Note: Batch capturing is not recommended for the first and last 30 seconds of your tape because of possible timecode and seeking issues. Capture these sections manually.

Preparing for batch capturing
A. *Clips selected for capture* **B.** *Capture Settings option*

See also

"About device control" on page 68

To log clips for batch capturing

You can specify which shots you want to use from source tapes by *logging* them as a set of offline files for later capture. If you set device-control options in the Preferences dialog box to remotely control your camera or deck, you can create offline files by using the clip-logging controls in the Capture panel, and then use the Batch Capture command to capture the logged clips automatically.

If you have a list of In and Out points, you can log them manually without a device online; simply enter each shot's In and Out points and click the Log Clip button. You can also log frame numbers using a separate logging or spreadsheet program and then import the spreadsheet into Adobe Premiere Pro as a list of offline files.

1 In the Capture panel, make sure that your device is online, as indicated above the preview.

2 Insert a tape into your device. Adobe Premiere Pro prompts you to name the tape. Be sure not to give any two tapes you log the same name.

3 Use the controls in the Capture panel to move to the first frame in your first shot, and click the Set In button. Then move to the last frame in the shot and click the Set Out button.

4 In the Setup area of the Logging pane, choose your media type from the Capture pop-up menu.

5 If you want to capture some frames extending beyond the In and Out points of each clip, enter the number of frames for these handles in the Handles setting of the Capture section.

6 Click the Log Clip button in the Timecode area of the Logging pane to log the clip you identified. Name the clip when prompted. Adobe Premiere Pro logs the clip by placing an offline file for it in the Project panel.

7 Repeat steps 2 through 6 to log each shot you want to batch capture.
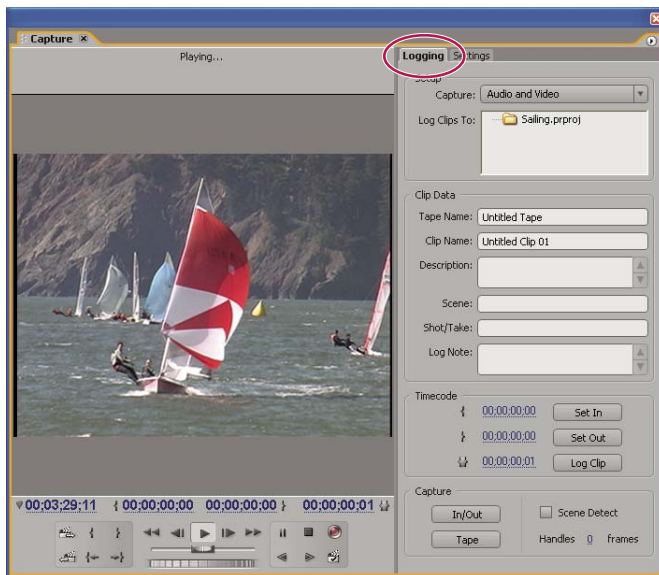
Capture panel with Logging active

To log clips interactively

1 Make sure that your device is connected and in VTR or VCR (not Camera) mode, and then choose File > Capture.

2 In the Logging pane, enter the settings you want to use as the defaults for Setup and Clip Data.

3 Play the tape. Click Set In or Set Out at any time, even as the tape plays. Repeat as necessary.

4 When you are satisfied with the In and Out points, click Log Clip, verify the clip data, and click OK.

*You can make slight timecode adjustments by using the plus sign (+) or minus sign (–). For example, to add five frames to the end of the Out point, select the entire Out point timecode, type **+5**, and press Enter.*

Tips for logging clips interactively

• Set options on the Logging pane of the Capture panel. Adobe Premiere Pro uses the current data in the Setup and Clip Data sections as defaults for subsequent logged clips. If you want to log a series of clips into the same bin with similar logging data, save work by specifying clip data before you start logging the series. When you click the Log Clip button, a dialog box appears so that you can accept or change the clip data.

• In the Clip Data section, specify a tape name. Adobe Premiere Pro asks for this name every time you begin batch capturing

• The Clip Name in the Clip Data section progresses in numerical increments automatically. For example, if you want to number a series of clips with clip names starting with Car Chase, enter **Car Chase 01**, making sure that the clip name ends with the number. Subsequent logged clips default to the next number, such as Car Chase 02.

• You can change Capture panel settings at any time. For example, if you see the action changing as the tape plays back, you can get ready to capture the new upcoming action by selecting a different bin to log subsequent clips into or by typing a different name for Description or Scene. You don't have to stop the tape as you change settings.

• You can operate the device and log clips using the keyboard. See the tool tips for Capture panel controls, or choose Edit > Keyboard Customization to view or change the shortcuts.

• You must click Log Clip to create a new offline file. This pauses the tape as you confirm the clip data for the new offline file.

Specifying batch-capture settings

A batch list of logged clips appears as a list of offline files in the Project panel. If you plan to capture many clips, you may want to create bins in the Project panel in advance so that you can log each set of offline clips directly into its own bin. When you batch capture, the offline files are replaced by captured clips, maintaining the bin organization you set up in advance.

You can capture audio and video to separate drives. Set the locations for new files by choosing Edit > Preferences > Scratch Disks. If you don't change the defaults, all files captured or created by Adobe Premiere Pro are stored in the same folder in which it stores the project files.

By default, the settings that Adobe Premiere Pro uses to batch capture offline files are the project's current capture settings. If an offline file has its own capture settings, Adobe Premiere Pro uses those settings when capturing it; the resulting clip maintains its capture settings so that it can easily be recaptured using the same settings. For example, if a clip's settings specify capture at a frame size of 720 x 480 in a project with a frame size of 320 x 240, Adobe Premiere Pro captures the clip at 720 x 480 unless you change its default. You can override a clip's capture settings by choosing the Override Capture Settings option in the Batch Capture dialog box.

To specify capture settings

You can assign capture settings to an offline file that are different from the project's, for example, to capture the clip at a resolution higher than the project's.

• To determine whether the offline file already has its own capture settings, look in the Capture Settings column in the Project panel. Scroll right to see this column. If an offline file has its own capture settings, its box in this column has a check mark. If the column is hidden, choose Edit Columns from the Project panel menu; then select Capture Settings. Click OK.

• To find out or change the capture settings for an offline file, select the clip in the Project panel, and choose Clip > Capture Settings > Set Capture Settings. The Capture Format menu lets you view the clip's capture format or choose a new one. Typically, choose a format that matches that of the source footage.

• To remove a clip's capture settings, select the clip in the Project panel and choose Clip > Capture Settings > Clear Capture Settings. By default, Adobe Premiere Pro captures this clip with the project's capture settings.

See also

To batch capture clips

1 Select the offline clips that you want to capture, and then choose File > Batch Capture.

2 In the Batch Capture dialog box, do any of the following:

• Choose Capture With Handles and enter the number of frames for the handles if you want to capture frames beyond the In and Out points identified for each clip in the batch.

• Choose Override Capture Settings if you want to replace the capture settings of individual clips in the batch with the project's default settings.

3 Verify that the deck and source videotape are set up properly for capture, and then click OK.

4 In the Insert Tape dialog box, insert the requested tape and click OK. If you are capturing from multiple tapes, be ready to insert them when prompted.

5 If you want to stop batch capturing, click the Stop button in the Capture panel, or press the Esc key.

Troubleshooting batch capturing

You can perform trouble-free batch capturing if device control and the project's capture settings are set up properly and if the offline files you logged are consistent and free of conflicting data. If you encounter problems with batch capturing, make sure that all clips you want to batch capture are set up with the proper settings:

- Each clip's Status must be Offline. Verify the status in the Project panel List view. If a clip is not offline, select it in the Project panel and choose Project > Unlink Media. If you select multiple clips and some are online, Adobe Premiere Pro captures the offline files only.

- Tape Name, Media Start, and Media End must be specified in the Edit Offline File dialog box for each offline file. As long as one selected offline file contains these settings, the Batch Capture command is available, but only clips with all three settings are captured. If necessary, verify this in the Project panel List view or double-click each offline file to edit settings.

- Recording video, audio, or both must be supported by the selected capture device. For example, audio isn't captured if the capture device doesn't capture audio. If settings exist that can't be captured, batch capturing stops and the Capture Settings Error dialog box appears.

- The file name of each clip (as specified in the Capture Settings dialog box) must not duplicate the file name of an existing clip. If necessary, double-click each offline file to verify that its name is unique. If you select an offline file with a duplicate name for batch capturing, Adobe Premiere Pro slightly alters the name of that clip when it captures it. In this way, it avoids overwriting the other file with the same name.

To manage capture errors when the Capture Settings Error dialog box appears, do one of the following:

- To fix the capture settings for any clips in the list, select one or more files in the list and click Edit Settings.

- To omit the clips with invalid capture settings and proceed with the rest of the batch capture, click Skip. Clips you skip are removed from the list and are not captured.

- To stop batch capturing, click Cancel. No clips are captured.

To import and export batch lists

You can import a batch list as a tab-delimited text (TXT) file or a comma-separated value (CSV) text file. When imported, each entry in the text batch list appears as an offline file in the Project panel. You can also export offline files as a CSV batch list so that you can transfer a logged clip list between projects and workstations. To see the format of a batch list, export it and open the file in a text editor such as Notepad or in a spreadsheet application. A batch list text file may come from sources such as Adobe Premiere 6.5, logging utilities such as Pipeline Autolog, or custom video-production software that uses a database or spreadsheet program to generate a batch list.

When you import a batch list, the order of fields in the list must be as follows: tape name, In point, Out point, clip name, and comment. When you export offline files as a batch list, Adobe Premiere Pro orders the fields as follows: tape name, In point, Out point, clip name, log note, description, scene, and shot/take. Exported field data is exported from the corresponding columns in the List view of the Project panel.

- To import a batch-list timecode log, open a project and choose Project > Import Batch List. Locate and select the file, and click Open.

- To export a batch-list timecode log, select the files that you want to log. Then choose Project > Export Batch List. Specify a file name and location, and click Save.

Offline files

An *offline file* is a placeholder for a source file that isn't currently available on disk. Offline files contain information about the missing source files they represent, and they give you flexibility when actual files are not available. If an offline file appears in the Timeline panel, "Media Offline" appears in the Program Monitor and in the track.

When you use the Capture panel to log clips from a tape, Adobe Premiere Pro automatically creates offline files containing the exact information required to capture the clips later. You can also create offline files manually. Use offline files in situations such as the following:

• Clips are logged but not yet captured. Because offline files behave like captured clips, you can organize the logged offline files in the Project panel and even lay out sequences with them in the Timeline panel before the offline clips are actually captured. When the offline files are captured (or located, if they were captured but missing), they replace the corresponding offline files.

• You want to capture logged clips using device control or batch capturing. In Adobe Premiere Pro, a batch-capture list is a set of offline clips; selecting specific offline clips sets them up for batch capturing.

• You want to recapture clips used in the project. This requires making the online clips offline by using the Unlink Media command.

• A source file is unavailable when you open a project, so that Adobe Premiere Pro can't locate it automatically and you can't locate it manually. Adobe Premiere Pro provides Offline and Offline All buttons in this case.

Note: Online and offline clips in Adobe Premiere Pro are not related to the concepts of online and offline editing.

To create an offline file

1 In the Project panel, click the New Item button ▣ at the bottom of the panel and choose Offline File from the menu.

2 For Contains, select an option as needed.

3 For Tape Name, type the name of the tape containing the source video for the offline clip.

4 For File Name, type the name of the file as you want it to appear on disk when you capture it using Adobe Premiere Pro. If you're creating an offline file for a source file that is captured but isn't on your computer yet, type the name of that file.

5 Enter a description, scene, shot/take, and log note as needed.

6 Enter the timecode for the entire untrimmed clip, including any extra frames you plan to capture for editing and transitions.

Note: To be eligible for capture, an offline file must contain at least a tape name, file name, and Media Start and Media End settings.

To edit an offline file

❖ In the Project panel, double-click the offline file, edit options as needed, and then click OK.

To replace an offline file with a captured source file

1 In the Project panel, select one or more offline files.

2 Choose Project > Link Media.

3 Select the source file, and click Select.

Note: If you selected more than one offline file, the Attach Which Media dialog box appears in turn for each file you selected. Pay attention to the offline file name in the title bar of the dialog box so that you relink the correct source file to each offline file.

To convert an online file to offline

1 In the Project panel, select one or more online files.

2 Choose Project > Make Offline.

3 Select one of the following options:

Media Files Remain On Disk   Makes the selected files offline in the project but doesn't erase the source files from the disk.

Media Files Are Deleted   Makes the selected files offline in the project and erases the source files from the disk.

Note: If you select Media Files Remain On Disk and recapture a clip using the same file name as the file left on disk, the original media file is replaced. To preserve original clips without changing their names, move them to another folder or disk, or specify different file names for the clips you recapture.

Timecode

About timecode

Many camcorders and high-end video decks record *timecode*, which marks specific frames with unique addresses. Timecode is important whenever you want to capture exactly the same frames that were identified or captured previously, as in the following tasks:

• You want to log clips before you capture them.

• You plan to capture clips using batch (automated) capture.

• You want to recapture clips because the original files became corrupted or were deleted.

• You plan to export sequences to another system by using AAF or EDL.

• You're using a system in which you edit quickly with low-resolution captures, and later recapture the clips at full resolution and quality for the final version.

• You plan to synchronize captured video with audio recorded separately.

Unlike the numbers on time counters found in home VCRs, timecode is recorded onto videotape as part of the video signal. If footage lacks timecode, you can add it by copying it with a camera or deck that writes timecode. You can then log or capture the video from that device.

For best results, timecode should run continuously from the beginning to the end of the tape; it shouldn't restart from zero anywhere in the middle. In editing, if you log a capture In point such as 00:00:01:09 but that number occurs on the tape two or three times because of timecode restarts, Adobe Premiere Pro can't be certain which 00:00:01:09 is the place to start its capture. It can easily capture the wrong clips from tapes with discontinuous timecode.

To ensure unbroken timecode, you need to either shoot it continuously or stripe your tape with it before shooting.

💡 *To ensure that you always shoot continuous timecode, record at least 5 seconds of extra video past the end of the action in any shot. If you review a clip in the camera, be sure to rewind the tape back into that 5-second margin before recording again. Your camcorder reads the timecode from the frame on which you stop and begins recording timecode with the very next frame number when you start your next shot. Be careful; if you leave a gap between the last frame of the previous shot and the first frame of the next, the camcorder begins writing timecode at 00:00:00:00 again.*

Striping or replacing timecode

You can ensure continuous timecode by recording timecode onto the tape before you use it. This process is called *striping* the tape. Striping is not necessary if you follow recommended shooting practices, but it can protect you from accidentally breaking timecode by miscuing a tape in your camera.

To stripe a tape with timecode

1 Put an unused tape in the camera. It should have no timecode.

2 If you're using a camera for striping, attach the lens cap and disable audio recording.

3 Ensure that all camera settings (particularly the audio sample rate) are *exactly* the same as the settings you will use when you shoot. Use all these same settings whenever shooting on that tape.

4 Begin recording. Let the camera or deck run until the entire tape has been recorded.

5 Before you record video on a striped tape, play about 30 seconds of it from the beginning. Verify that the camcorder is reading the timecode you striped before you start shooting. The 30-second empty lead on the tape also helps in batch capturing.

💡 *Check your camera's settings whenever changing tapes, especially when reinserting a tape you had begun shooting previously. Though you may want to use different settings for different tapes, it's best to use the same settings from beginning to end of each tape. These should match the settings used when first striping that tape.*

To replace DV timecode

If your source footage is in DV format and its timecode isn't continuous, you can replace its timecode by making a DV copy, or dub, of the tape. The DV device making the copy records new timecode that is continuous, so you can then log and capture video, with the new timecode, from the copy.

Note: This technique does not work when dubbing to the DVCAM format or using a Panasonic AG-DV2500 as the record deck.

1 Load the tape you shot into a camcorder or deck, and fully rewind it.

2 Load a new tape into a second camcorder or deck, which you will use to record the copy.

3 If the recording device includes an option to record video with the timecode from your original tape, be sure that this option is disabled. See the operating instructions for the device for information on this option.

4 If both devices are digital, connect them using a digital connection, such as IEEE 1394 or SDI. This will make a full-quality copy.

5 Connect the recording device to a television monitor.

6 Set both devices to VTR mode.

7 Make sure that the recording device is set to record from the digital port.

8 Begin recording the new tape and then start your original tape playing. Let the camcorders or decks run until the entire original tape has been copied.

Note: Scene Detect recognizes the starting and stopping points for each shot by looking for jumps in the timestamps. Because copying a tape this way creates a single clip with a continuous timestamp, you can't use Scene Detect when you capture the copy in Adobe Premiere Pro.

Capturing timecode

The timecode of source video is captured when you use device control. Timecode capture with controllable analog devices depends on the precision of your tape deck. If your tape deck cannot read the timecode accurately, you may have to calibrate your system or manually assign the timecode to your movie by matching frames.

Note: Timecode is visible in the tape counter only on equipment that can recognize timecode, unless the timecode has been burned in or recorded over the picture in a copy of the tape. Most analog home VCRs cannot read or write timecode.

To set timecode manually for a clip

At times you may want to change the timecode from that recorded by Adobe Premiere Pro. For example, you captured footage from a DV copy of a Hi8 tape originally recorded with RCTC (Rewritable Consumer Time Code). The DV copy, and the video files on your computer copied from it, carry the DV timecode, not the original RCTC. For convenience in referencing shot logs made for the original Hi8 tape, you want to reset the timecode to the original RCTC numbers.

1 Select the clip in the Project panel.

2 Choose File > Timecode, specify options as needed, and click OK.

To enter timecode

As you capture and edit video, you enter timecode values many times. For example, you enter timecode values to set In and Out points for clips and to navigate the Timeline panel. Adobe Premiere Pro provides many ways to enter timecode.

In Adobe Premiere Pro, the duration between the In and Out points includes the frames indicated by the timecode. For example, if you enter the same timecode for the In and Out points of a clip, the duration of the clip is one frame. When entering timecode, you can substitute periods for colons or type numbers without punctuation. Adobe Premiere Pro interprets the numbers you type as hours, minutes, seconds, and frames.

• To set a specific timecode, select the timecode, type a new timecode, and then press Enter.

• To adjust the current timecode by dragging, drag the timecode horizontally. For example, to set an earlier timecode, drag to the left.

• To adjust the current timecode by using a relative value, type the plus sign (+) or minus sign (–) and the number of frames to add or subtract. For example, to subtract five frames from the current timecode, select the entire timecode, type **–5**, and then press Enter.

Online and offline editing

About online and offline editing

For *online editing*, you capture clips at the level of quality required for the final version of the video program. This is the default method of working in Adobe Premiere Pro. Online editing works well when the speed and storage capacity of the host computer are adequate to the demands of the video formats used. For example, most modern computers can handle the datarate of DV in full resolution. They may be challenged, however, by the greater demands of, for example, HDV or HD footage. For many videographers, that's where *offline editing* comes in.

In *offline editing*, you capture low-quality clips for editing purposes, but recapture them at high resolution when it's time to finish, render, and export your final product. Editing the low-resolution clips allows standard computers to edit excessively large assets, such as HDV or HD footage, without losing performance speed or running out of storage. It also lets editors use laptops to edit—for example, while on location.

You may edit a project entirely online. On the other hand, you may edit in a two-phase workflow: making your initial creative decisions offline, then switching to online for finishing tasks like fine-tuning, grading, and color correction.

You can complete an offline edit of, for example, an HD project with Adobe Premiere Pro and then export your project to the Advanced Authoring Format (AAF) or EDL for transfer to an editing system with more powerful hardware. You can then perform the final online edit and rendering, at full HD resolution, on that system.

To recapture clips

You can recapture clips in an existing project using batch capturing. Clips can be recaptured only if they have been unlinked from their source files, becoming offline files, and if the source medium contains timecode.

1 If you want to override the capture settings for any clip that you intend to recapture, set the clip's Capture settings.

2 In the Project panel, select all the clips you want to recapture. If you want to select clips in different bins, use List view, which lets you view multiple bins.

3 Choose Project > Make Offline. The selected clips are dissociated from their current source files.

4 In the Make Offline dialog box, specify whether the source media files are to remain on disk or be deleted.

5 With the offline files still selected, choose File > Batch Capture. Adjust the settings as necessary.

6 Verify that the deck and source videotape are set up properly for capture, and then click OK.

7 After recapturing is complete, save the project.

Importing files

To import files

You can import video, audio, graphics, and photo files of a variety of formats into an Adobe Premiere Pro project. You can import a single file, multiple files, or an entire folder. Frame sizes cannot exceed 4096 x 4096 pixels. If the software you use to create art does not let you specify pixels as a unit of measure, specifying points may be sufficient.

If you import a file and it appears horizontally or vertically distorted (stretched), its pixel aspect ratio may not be interpreted correctly. Change the pixel aspect ratio for the file if necessary. Adobe Premiere Pro continuously rasterizes EPS images, so you can scale these files without pixelation.

• To import clips, choose File > Import. Locate and select a file, or hold down Control and select multiple files. Click Open.

• To import a recently imported clip, choose File > Import Recent File > *[file name]*. (The file name may not appear if Adobe Premiere Pro preferences have been reset.)

• To import a folder of clips, choose File > Import. Locate and select the folder, and then click Import Folder. The folder imports as a new bin in the Project panel with the folder's contents.

You can also import files and folders by dragging them from Windows Explorer into the Project panel.

See also

"About aspect ratio" on page 29

Importing digital audio

You can import digital audio clips stored as audio files or tracks in video files. Digital audio is stored on computer hard disks, audio CDs, or digital audio tape (DAT) as binary data readable by computers. To keep quality as high as possible, transfer digital audio files to your computer via digital connections. Avoid digitizing the analog outputs from your audio sources through your sound card.

For maximum editing performance, Adobe Premiere Pro conforms each imported audio channel to 32-bit floating-point data at the project's sample rate. All imported audio is conformed, even audio tracks in video files.

Note: If you want to capture an audio-only file from a digital video source, choose Audio from the Capture pop-up menu in the Logging pane of the Capture panel.

You can use CD audio (CDA) files in a project, but before you can import them into Adobe Premiere Pro, you need to convert them to a supported file format, such as WAV. You can convert CDA files using an audio application such as Adobe Audition˚.

Note: Make sure that you own the copyrights or have licensed the copyrights to any CD tracks you use.

See also

"Supported file formats for import" on page 67

Using compressed audio formats

Music stored in formats such as MP3 and WMA are compressed using a method that removes some of the original audio quality. To play back compressed audio, Adobe Premiere Pro must decompress the file and may need to resample it to match your output settings. These conversions are likely to degrade audio quality. For this reason, use an uncompressed or CD audio version of the audio clip whenever possible.

Using audio from Adobe Audition

You can use Adobe Audition to perform advanced audio editing. If you export the audio from Adobe Audition to an audio file format compatible with Adobe Premiere Pro, you can import the audio into your Adobe Premiere Pro projects. If you select the Project Linking option as you export audio from Adobe Audition, you can choose Edit > Edit Original in Adobe Premiere Pro to open an audio clip's Adobe Audition project directly from within Adobe Premiere Pro.

Importing still images

You can import still images with frame sizes up to 4096 x 4096 pixels, individually or in groups. The size and aspect ratio of imported still images are affected by the same factors that affect other imported assets, for example, whether they use square pixels.

An imported still image uses the duration specified in the Still Image preferences. You can change the duration of a still image in a Sequence panel.

To change the default duration for still images

1 Choose Edit > Preferences > General.

2 For Still Image Default Duration, specify the number of frames you want as a default duration for a still image.

Note: Changing the default duration of still images does not affect the duration of still images that are already part of a sequence.

To change the duration of a still image in the Timeline panel

❖ Do one of the following:

• Drag the Selection tool over either end of the image.

• Select the clip, and choose Clip > Speed. Enter a new duration, and click OK.

To adjust the pixel aspect ratio of an imported still image

1 Select the still image in the Project panel.

2 Choose File > Interpret Footage.

3 Select an option in the Pixel Aspect Ratio section, and click OK.

4 Select one of the following:

Use Pixel Aspect Ratio From File Uses the original aspect ratio saved with the still image.

Conform To Lets you choose from a list of standard aspect ratios.

Note: When using Photoshop to generate images for use in video projects, it's best to use the Photoshop preset named for the video format you'll use. Using the preset ensures that your images are generated with the correct aspect ratio.

See also

"About aspect ratio" on page 29

Importing Photoshop images

You can import files from Adobe Photoshop 3.0 or later. Adobe Premiere Pro supports 16-bit as well as 8-bit Photoshop files. You can control how layered Photoshop files are imported. Empty (transparent) areas of nonflattened Photoshop files are transparent when imported into Adobe Premiere Pro, because the transparency is stored as an alpha channel. This lets you import Photoshop graphics and superimpose them over clips in other tracks with no extra effort.

In addition, you can import a layered Photoshop file as a sequence, enabling you to set up graphics in Photoshop and then import them into an Adobe Premiere Pro project.

See also

"To create a new Photoshop file in your project" on page 155

Importing Illustrator images

You can import an Adobe Illustrator still-image file directly into an Adobe Premiere Pro project. Adobe Premiere Pro converts path-based Illustrator art into the pixel-based image format used by Adobe Premiere Pro, a process known as *rasterization*. Adobe Premiere Pro automatically *anti-aliases*, or smooths, edges of the Illustrator art. Adobe Premiere Pro also converts all empty areas into an alpha channel, so that empty areas become transparent.

If you want to define the dimensions of the Illustrator art when it is rasterized, use Illustrator to set crop marks in the Illustrator file. For information about setting crop marks, see Illustrator Help.

To import a layered Photoshop or Illustrator file

When you import a layered file saved in Photoshop or Illustrator file formats, you can choose how to import the layers in the Import Layered File dialog box:

• Merge the layers, combining all layers into a flattened clip.

• Import only one of the layers from the file.

• Convert the layers into a sequence of frames.

Adobe Premiere Pro imports attributes that were applied in the original file, including position, opacity, visibility, transparency (alpha channel), layer masks, adjustment layers, common layer effects, layer clipping paths, vector masks, and clipping groups. A white background in Photoshop exports as opaque white, whereas a checkerboard background indicates areas that translate into alpha channel transparency when the Photoshop file is exported to a format that supports alpha channels.

Converting layers into a sequence makes it easy to set up graphics using layers in Photoshop or Illustrator. When Adobe Premiere Pro converts layers to a sequence, the sequence is imported into the Project panel as a bin; each layer in the file becomes an individual clip in the bin. Each clip's name consists of the layer name followed by the name of the file that contained it. In addition, Adobe Premiere Pro automatically creates a sequence in which each layer is inserted in order at the default still-image duration. You can use this sequence as a clip in other sequences.

Note: Some Photoshop layer attributes aren't supported, such as special blending modes and the Knockout option. For best results, use basic transparency and opacity in Photoshop.

1 Choose File > Import.

2 In the Import dialog box, locate and select the layered file. (If the file name doesn't appear, make sure that All Supported Files is selected for Files Of Type.)

3 In the Import Layered File dialog box, select either Footage or Sequence from the Import As pop-up menu.

4 Choose Merged Layers to import all layers in the file as a single layer, or choose the layer you want to import from the file.

5 Choose one of the following options from the Footage Dimensions pop-up menu, and then click OK:

Document Size   Resizes the file to the size of the document as specified in Project settings.

Layer Size   Imports the file at the size of the merged layers or selected layer.

Note: When you import one layer as a single clip, its name in the Project panel consists of the layer name followed by the original file name.

Preparing still images

When you prepare still images in applications that support color management, such as Photoshop, colors may appear more consistent between the application and Adobe Premiere Pro if you prepare images in a video-friendly color space, such as sRGB or NTSC RGB.

For best results, create files with a frame size at least as large as the frame size of the project so that you don't have to scale up the image in Adobe Premiere Pro. Scaling an image larger than its original size can cause loss of sharpness. If you plan to scale up an image, prepare it at a larger frame size than the project. For example, if you plan to scale up an image 200%, prepare the image at double the project frame size before you import it.

Importing animations

You can import an animation contained in a single file, such as an animated GIF. You can also import a sequence of numbered still-image files and automatically combine them into a single video clip; each numbered file becomes one frame of video. Importing a sequence is useful for animations exported as a series of numbered still images by applications like After Effects. The images in the series cannot include layers. For information on layers and flattening, see the application's documentation.

When creating three-dimensional images or animations for use in Adobe Premiere Pro, follow these guidelines whenever possible:

• Use broadcast-safe color filtering.

• Use the pixel aspect ratio and frame size specified in the project settings in Adobe Premiere Pro.

• Use the appropriate field settings to match your project.

• If you're using an Adobe application to generate the sequence, select the Embed Project Link option so that you can open the sequence in the application that was used to create it.

To import numbered still-image files as one clip

1 Make sure that each still-image file name contains an equal number of digits at the end and has the correct file extension—for example, file000.bmp, file001.bmp, and so forth.

2 Choose File > Import.

3 Locate and select the first numbered file in the sequence, select Numbered Stills, and click Open. When Numbered Stills is selected, Adobe Premiere Pro interprets each of the numbered files as a single frame in a video clip.

Note: Changing the default duration of still images in the Preferences dialog box does not affect the duration of numbered stills imported into a video clip. Each still becomes one frame when imported in this way.

Importing earlier projects

You can add the contents of an Adobe Premiere 6.0 or 6.5 project into an open Adobe Premiere Pro project. The imported project's clips and sequences are added to the Project panel in a bin named after the imported project. The bin hierarchy of the imported project is maintained within its new bin. All of the imported project's special effects, such as transitions and effects, are included. Use caution when importing a project into another project with a different timebase or audio sample rate, because these differences may affect edit positioning and audio quality.

Importing a project into another project is the only way to transfer its complete sequence and clip information.

Note: In earlier versions of Adobe Premiere, storyboards were stored in files independent of project files. Adobe Premiere Pro contains all storyboard features within the Project panel, but you can import storyboard files created in earlier versions by choosing File > Import.

Importing libraries

Adobe Premiere 6.5 supports containers called *libraries*, which store clips from one or several projects in files. A library (PLB) is a file apart from any project file. Although Adobe Premiere Pro doesn't directly support libraries, it allows you to import PLB library files. A library converts to a bin when you import it into an Adobe Premiere Pro project. To store a set of clips to make them available for other projects, simply save a project that contains the clips, and import that project into other projects.

Chapter 6: Managing and viewing assets

Customizing the Project panel

To change Project panel views

After you obtain an asset, its name appears in the Project panel. The Project panel lists detailed information about each asset in your project. You can view and sort assets in either List view or Icon view. List view displays additional information about each asset. You can customize the information it displays to meet the needs of your project.
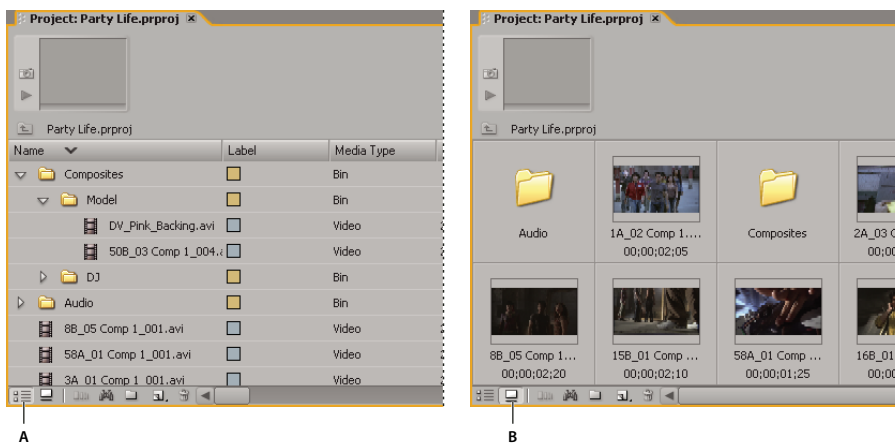
Project panel views
A. List view B. Icon view

• To change from one view to another, click the List View ⊟≣ button or the Icon View ⬚ button at the bottom of the panel, or choose View > List or View > Icon from the Project panel menu.

• To arrange items in Icon view, drag an item to any square. As you drag, a vertical bar indicates where the item is going. If you drag an item to a bin, the item goes inside the bin.

💡 *You can use Icon view for storyboarding and then use the Automate To Sequence feature to move the storyboard into a sequence.*

• To sort items in List view, click the column heading by which you want to sort the items. If bins are expanded, items sort from the top level and down the Project panel hierarchy. To reverse the sort order, click the column heading again.

• To hide or show the thumbnail viewer and clip information, choose View > Preview Area from the Project panel menu.

• To hide or set the size of thumbnails, choose Thumbnails from the Project panel menu.

• To remove empty space between items in Icon view and arrange them within the width of the Project panel, choose Clean Up from the Project panel menu.

To add a column

1 Choose Edit Columns from the Project panel menu.

2 Select the name of the column after which the new column will appear, and click Add.

3 Type a name.

4 Choose a type. Text columns can contain any text you enter. Boolean columns provide a check box. Click OK.

To customize List view columns

The columns in the Project panel's List view tell various things about the assets listed. You can select which columns Adobe Premiere Pro will display, rename columns, and change their order.

Choose Edit Columns from the Project panel menu, and do any of the following:

• To display a column, select the option next to the column.

• To rename a column, select a column name, click Rename, and edit the name.

• To remove a column, select a column name and click Remove.

• To move a column to the left in List view, select its name and click Move Up. To move it to the right, click Move Down.

You can make certain adjustments to the Project panel:

• To change the width of a List view column, position the mouse over a dividing line between column headings until the Column Resize icon ✛ appears; then drag horizontally.

• To sort by a column, click a column name to switch between ascending and descending sorts.

• Rearrange columns by dragging them horizontally in the Project panel.

Note: If you can't locate or change a column attribute in the Edit Columns dialog box, the attribute is locked by Adobe Premiere Pro and cannot be changed. For example, you can change the names of columns you added, but not the names of columns built into Adobe Premiere Pro.

See also

List view columns

The names of most of the Project panel's columns are self-explanatory. Following are definitions for the less obvious ones:

Name By default, displays the asset's file name. You can change the name the asset uses within the project. You cannot remove the Name field from the List view.

Label Color that helps identify and associate assets.

Media Duration Length of the source file, expressed in the currently specified Display option.

Note: In Adobe Premiere Pro, all durations in any panel include the frames specified by the In point and Out point. For example, setting the In point and Out point to the same frame results in a duration of one frame.

Video Duration The duration of a clip's video component as defined by the Video In point and Out point and incorporating any adjustments applied in Adobe Premiere Pro, such as changing the clip speed.

Audio Duration The duration of an asset's audio component as defined by the Audio In point and Out point and incorporating any adjustments applied in Adobe Premiere Pro, such as changing the clip speed.

Video Info The frame size and aspect ratio of the asset, and whether an alpha channel is present.

Video Usage The number of times the video component of an asset is used in the project's sequences.

Audio Usage The number of times the audio component of an asset is used in the project's sequences.

Tape Name The name of the source tape, as entered when the clip was logged or captured.

Description Optional description of the asset, entered when the clip was logged or captured.

Comment Optional comment, entered when the asset was logged or captured, intended for identification and sorting purposes.

Log Note Optional text that was entered using the Log Note option when an asset was captured using the Capture panel.

File Path Location of the file on disk, expressed as a folder path.

Capture Settings Indicates whether a file has capture settings assigned in Adobe Premiere Pro.

Status Whether an asset is online or offline. If a clip is offline, this also indicates why.

Offline Properties Whether the source of an offline file contains video, audio, or both.

Scene Scene name that was entered using the Capture panel's Scene option. It can be helpful to use scene names from a script here to help organize your work.

Shot/Take Shot and/or take name that was entered using the Capture panel's Shot/Take option.

Good Indicates preferred assets.

To define a different thumbnail for a clip

By default, the first frame of a clip appears in the thumbnail viewer and in other places in the project where the thumbnail is displayed. You can override the default thumbnail by designating any clip frame as a *poster frame*.

1 Select the clip in a Project panel.

2 Press the Play button ▶ or drag the play slider on the thumbnail viewer in the upper left corner of the Project panel until the frame you want is displayed.

3 Click the Set Poster Frame button 📷 .

💡 *You can also set the poster frame by right-clicking the thumbnail viewer and choosing Set Poster Frame.*

Organizing assets

About bins

The Project panel can include bins, which you can use to organize project contents in much the same way as folders in Windows Explorer. Bins can contain source files, sequences, and other bins. You may want to use bins in the following ways:

• To store lists of offline files for batch capture.

• To store each sequence and its source files separately.

• To organize files by type, such as video, still images, and audio files.
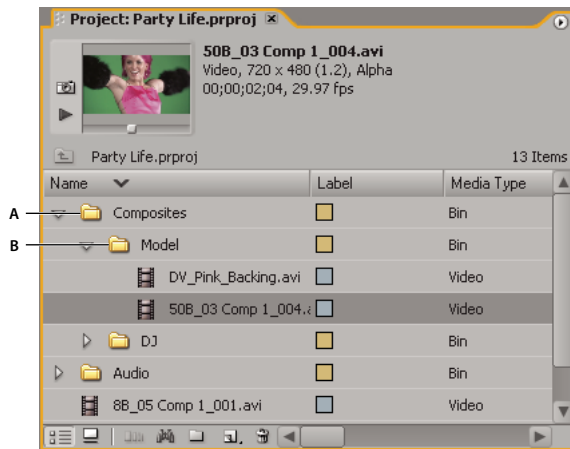
Project panel
A. *Parent bin* **B.** *Child bin*

To work with bins

- To add a bin, click the New Bin button 📁 at the bottom of the Project panel.

- To delete one or more bins, select the bins and click the Delete icon 🗑 at the bottom of the Project panel.

💡 *If you click New Bin multiple times in a row, each new bin is nested inside the previous new bin.*

- To move an item into a bin, drag the item to the Bin icon. You can move bins into other bins to nest them. In Adobe Premiere Pro 2.0, dropping an item into a bin does not automatically open the bin.

- To display the contents of a bin, in List view, click the triangle beside the Bin icon to expand it, or double-click the bin.

- To show the contents of an enclosing (parent) bin when you're viewing only the contents of a nested bin, click the Parent Bin button 📤 in the Project panel. You can continue to click this button until the top-level contents of the Project panel appear.

See also

"To create bins of favorite effects" on page 253

To label assets

Labels are colors that help you identify and associate assets. You assign and view labels in the Project panel. Label colors mark assets in the Project panel's Label column and in the Timeline panel.

- To assign a label to an asset, select a clip in the Project panel, choose Edit > Label, and choose a color.

- To select all assets with the same label, select an asset that uses the label and choose Edit > Label > Select Label Group.

- To edit label names or colors, choose Edit > Preferences > Label Colors. Click a color swatch to edit a color.

- To set default labels for a media type, choose Edit > Preferences > Label Defaults.

Note: Label defaults affect assets you add to the Project panel from the time you change the defaults; the command doesn't change label colors for assets already in the Project panel. To change label colors for assets already in the Project panel, use the Edit > Preferences > Label Colors command.

Working with assets

About clip properties

Adobe Premiere Pro includes clip analysis tools that you can use to evaluate a file in any supported format stored inside or outside a project. For example, after producing a video clip to be streamed from a web server, you can use clip analysis tools to determine whether a clip you exported has an appropriate data rate for Internet distribution.

The Properties feature provides detailed information about any clip. For video files, analyzed properties can include the file size, number of video and audio tracks, duration, average frame rate, audio sample rate, video data rate, and compression settings. You can also use the Properties feature to alert you to the presence of any dropped frames in a clip you just captured. Use the data rate graph to evaluate how well the output data rate matches the requirements of your delivery medium. It charts each frame of a video file to show you the render keyframe rate, the difference between compression keyframes and differenced frames (frames that exist between keyframes), and data rate levels at each frame. The graph includes the following information:

Data rate The line represents the average data rate.

Sample size The red bars represent the sample size of each keyframed frame.

Differenced frames sample size The blue bars represent the sample size of the differenced frames between compression keyframes.

To see the properties of a clip

❖ Do one of the following:

- If the clip is in the Project panel, select it to display a subset of its properties in the preview area at the top of the Project panel.

- If the clip is in the Source Monitor, Timeline panel, or Project panel, select it and choose File > Get Properties For > Selection.

- If the clip is not in the project, choose File > Get Properties For > File. Locate and select the clip you want to analyze, and then click Open.

You can also view clip properties in the Source Monitor, Timeline panel, or Project panel by right-clicking a clip and choosing Properties.

To duplicate a clip

1 In the Project panel, select a clip, and choose Edit > Duplicate.

2 To rename the duplicate clip, select it, choose Clip > Rename, and type a new name for the clip.

You can also create a duplicate clip by copying and pasting it in the Project panel (or its folders), by Ctrl-dragging a clip in the Project panel, or by dragging a clip from the Source Monitor to the Project panel.

To rename a clip

All files in your project are stored on your hard disk as individual files. Only a reference to each file is added to the Project panel in Adobe Premiere Pro. Whenever you rename a clip in Adobe Premiere Pro, the original file and file name remain untouched on your hard disk.

1 Select the clip, and choose Clip > Rename.

2 Type the new name, and press Enter.

You can also rename a selected clip by clicking its name once to select the text, typing the new name, and pressing Enter. In addition, the Rename command is available when you right-click a clip.

To rename an original source file

❖ Quit Adobe Premiere Pro and rename the file on the Windows desktop.

The next time you open the project, Adobe Premiere Pro asks you to locate the file.

To remove an item from the Project panel

❖ Select the item and press the Delete key.

This does not delete the file from the hard disk

Note: When you use the Project > Make Offline command, you have the option of deleting the actual source file along with its reference in the project. (See "Offline files" on page 82.)

To remove unused assets

You can remove assets you haven't used in the Timeline panel from the Project panel.

❖ Do one of the following:

- Sort the Project panel List view by the Video Usage or Audio Usage columns to identify unused clips, and then select and delete them.

- Choose Project > Remove Unused.

To find an asset

❖ To find any item in a project or folder based on the contents of any column in List view, choose Edit > Find or click the Find button , specify options, and click Find.

To play back a clip in the Project panel

You can use the *preview area* at the top of a Project panel to preview individual clips.

1 Select the clip.

2 Press the Play button on the thumbnail viewer. The Play button becomes a Stop button. Press Stop to stop playback. (Playing the clip in the thumbnail viewer does not affect Source Monitor views.)

To change the frame rate of a file

You can use the Interpret Footage command to change the frame rate that Adobe Premiere Pro assumes for a clip. Changing the frame rate changes the original duration proportionally. For example, if you set a 10-second, 24-fps clip to 48 fps, it becomes half as long, with a new duration of 5 seconds. Be aware that a clip's frame rate is reconciled with the project's frame rate. For example, if you change a 24-fps clip to 48 fps and it's used in a 24-fps project, the project can display only every other frame of the clip.

You can also change clip speed and duration by choosing the Clip > Speed command for a clip selected in the Timeline panel. However, such a change affects only that clip instance in the Timeline panel. Using the Interpret Footage command changes how a file is interpreted throughout a project.

1 In the Project panel, select a clip.

2 Choose File > Interpret Footage, select a Frame Rate option, and click OK.

Source and Program Monitors

About the Source and Program Monitors

The Source Monitor plays back individual clips. In the Source Monitor you prepare clips that you want to add to a sequence by specifying In and Out points and the clip's source tracks (audio or video). You can also insert clip markers and add clips to a sequence in the Timeline panel.

The Program Monitor plays back the sequence of clips that you are assembling. It's your view of the active sequence in the Timeline panel. You can set sequence markers and specify a sequence's In and Out points, which define where frames are to be added or removed from the sequence.

Each monitor contains both a time ruler and controls to play back and cue the current frame of a source clip or sequence.
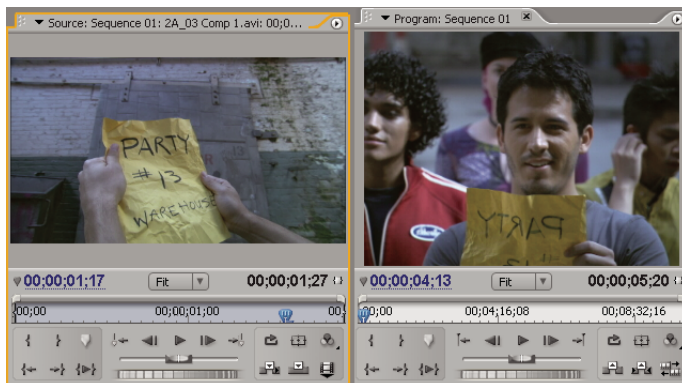
Source Monitor (left) and Program Monitor (right)

To open or clear a clip in the Source Monitor

To view and edit source clips listed in the Project panel or individual clip instances in a sequence, open the clips in the Source Monitor. The Source menu, accessed from the Source Monitor tab, lists open clips.

1 To open a clip, do any of the following:

• Double-click the clip in the Project or Timeline panel, or drag a clip from the Project panel to the Source Monitor. The clip appears in the Source Monitor and its name is added to the Source menu.

• Drag multiple clips or an entire bin from the Project panel into the Source Monitor, or select multiple clips in the Project panel and double-click them. Clips are added to the Source menu in the order in which they were selected, and the last clip selected appears in the Source Monitor.

• Choose the name of the clip you want to see from the Source menu (click the triangle to the left of the current clip's name on the Source tab to make the menu appear).

The Source menu lists master clips by name. Clips opened from a sequence are listed by their sequence name, clip name, and starting time in the sequence.
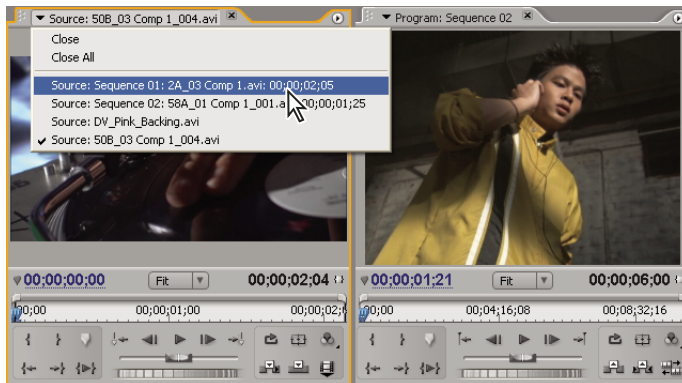
Choosing a clip to view from the Source menu

2 To clear a clip from the Source monitor, in the Source menu, choose Close to clear or Close All to clear all clips.

You can also close the current clip by clicking the Close button *in the Source Monitor tab.*

Source and Program Monitor time controls

The Source Monitor has several controls for moving through time (or frames) in a clip. The Program Monitor contains similar controls for moving through a sequence.
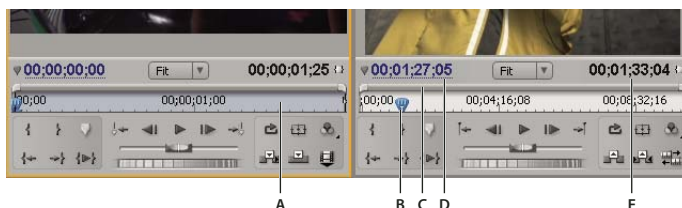
Time controls in the Source and Program Monitors
A. Time ruler B. Current-time indicator C. Viewing area bar D. Current time display E. Duration display

Time rulers Display the duration of a clip in the Source Monitor and sequence in the Program Monitor. Tick marks measure time using the counting method specified in the project settings. You can toggle the time rulers to display audio samples. Each ruler also displays icons for its corresponding monitor's markers and In and Out points. You can adjust the current time, markers, and the In and Out points by dragging their icons in a time ruler.

Current-time indicator (CTI) Shows the location of the current frame in each monitor's time ruler. The CTI is the light blue triangle in the ruler.

Current time displays Show the timecode for the current frame. The current time displays are located at the bottom left of each monitor's video. The Source Monitor shows the current time for the open clip. The Program Monitor shows the sequence's current time. To move to a different time, click in the display and enter a new time, or place the pointer over the time display and drag left or right. You can change the display between full timecode and a frame count by Ctrl-clicking the current time in either monitor or the Timeline panel. (See "To move the current-time indicator using timecode" on page 109.)

Duration display Show the duration of the open clip or sequence. Each monitor's duration indicator is located next to the Duration icon below the video display. The duration is the time difference between the In point and the Out point for the clip or sequence. When no In point is set, the starting time of the clip or of the sequence is substi-

tuted. When no Out point is set, the Source Monitor uses the ending time of the clip to calculate duration, and the Program Monitor uses the ending time of the last clip in the sequence to calculate duration.

Viewing area bars Correspond with the visible area of the time ruler in each monitor. They are the thin bars with curved handles above each time ruler. You can drag the handles to change the width of the bar and thereby change the scale of the time ruler below. Expanding the bar to its maximum width reveals the entire duration of the time ruler, and contracting the bar zooms in for a more detailed view of the ruler. By dragging the center of the bar, you can scroll the visible part of a time ruler without changing its scale.

Note: Although the Program Monitor's current-time indicator corresponds with the current-time indicator in the Timeline panel, changing the Program Monitor's time ruler or viewing area bar does not affect the time ruler or viewing area in the Timeline panel.

To view safe zones in the monitors

Safe zone guides are for your reference and are not included in previews or export.

Safe zones in Program Monitor
A. Action-safe zone B. Title-safe zone

❖ Click the Safe Margins button ⊞ below the Source or Program Monitor. Click the button again to remove the safe zone guides.

💡 *The standard action- and title-safe margins are 10% and 20%, respectively. However, you can change the dimensions of the safe zones in the Project Settings dialog box. See "General settings" on page 25.*

To set display quality

You can reduce the resolution of the Source or Program Monitors to decrease the processing demands on your computer. Reducing the quality setting of the Program Monitor may allow your system to create real-time previews of parts of the sequence that would otherwise require rendering.

❖ In the Source or Program Monitor panel menu, choose a quality setting:

Highest Quality Displays video in the monitor at full resolution.

Draft Quality Displays video in the monitor at one-half resolution.

Automatic Quality Measures playback performance and dynamically adjusts quality.

Note: All quality settings use a bilinear pixel resampling method to resize the video image. For exporting a sequence, a cubic resampling method (which is superior to bilinear) is used.

To change magnification

The Source and Program Monitors scale video to fit into the available area. You can change the magnification setting for each view to see the video in more detail, or to increase the size of the pasteboard area around the image (to adjust motion effects more easily, for example).

1 Choose a magnification setting from the View Zoom Level menu (to the right of the current time display) in the Source or Program Monitor.

In the Source Monitor, percentage values refer to the size of the source media. In the Program Monitor, percentage values refer to the image size specified by the project settings. Fit scales the video to fit in the monitor's available viewing area.

2 To change the visible area of a monitor, use the monitor's scroll bars to change the visible area of the video image. Scroll bars appear when the current size of the monitor can't contain the entire image.

To choose a display mode

You can display normal video, the video's alpha channel, or one of several measurement tools.

❖ In the Source or Program Monitor, click the Output button ⬧, or click the panel menu and choose a display mode setting:

Composite Video Displays the normal video.

Alpha Displays transparency as a grayscale image.

All Scopes Displays a waveform monitor, vectorscope, YCbCr Parade, and RGB Parade.

Vectorscope Displays a vectorscope that measures the video's chrominance, which includes hue and saturation.

YC Waveform Displays a standard waveform monitor, which measures the video's luminance in IRE.

YCbCr Parade Displays a waveform monitor that measures the Y, Cb, and Cr components of the video separately, in IRE.

RGB Parade Displays a waveform monitor that measures the R, G, and B components of the video separately, in IRE.

Vect/YC Wave/YCbCr Parade Displays a waveform monitor, vectorscope, and YCbCr Parade.

Vect/YC Wave/RGB Parade Displays a waveform monitor, vectorscope, and RGB Parade.
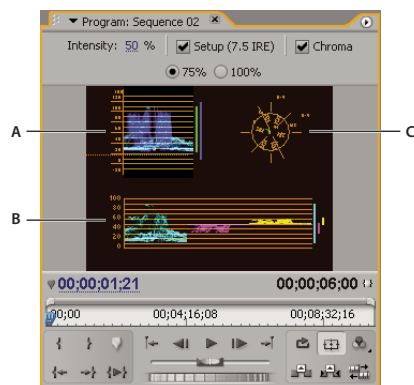
Program Monitor set to Vect/Wave/YCbCr Parade
A. Waveform monitor B. YCbCr Parade C. Vectorscope

💡 *To use the waveform monitor and vectorscope displays most effectively, view them in a reference monitor that is ganged to the Program Monitor. See "To gang the Reference Monitor and Program Monitor" on page 105.*

See also

"About the vectorscope and waveform monitors" on page 279

Playing assets

To play video in the Source and Program Monitors

The Source and Program Monitors contain several controls that resemble the playback controls on a video deck. Use the Source Monitor controls to play or cue a clip. Use the Program Monitor controls to play or view the active sequence.

Most playback controls have keyboard equivalents. When you want to use keyboard shortcuts to control playback, make sure that the monitor you want is active. Click the video image in the monitor you want to activate. When a monitor is active, it displays blue bars above and below the video display area.

❖ Do any of the following:

• Click the Play button ▶ , or press L or the spacebar. (To stop, click the Stop button ■ or press K or the spacebar. The button and the spacebar toggle between Play and Stop.)

• To play in reverse, press J.

• To play from the In point to the Out point, click the Play In To Out button {▶} .

• To play an entire clip or sequence repeatedly, click the Loop button 📷 , and then click the Play button ▶ . Click the Loop button 📷 again to deselect it and prevent looping.

• To play from the In point to the Out point repeatedly, click the Loop button 📷 , and then click the Play In To Out button {▶} . Click the Loop button 📷 again to deselect it and prevent looping.

• To play forward faster, press L repeatedly. For most media types, the clip's speed increases from one to two to three to four times.

• To play backward faster, press J repeatedly.

• To play forward slower, hold down the K key and press the L key, or press Shift+L repeatedly. For most media types, the clip plays in slow motion, from .1 to .2 times.

• To play backward slower, hold down the K key and press the J key, or press Shift+J repeatedly.

• To play around the current time, from preroll to postroll, Alt-click the Play In To Out button. Pressing Alt changes the button to the Play Edit button ▶|▶ .

See also

"To position the current time in the Timeline panel" on page 109

To move to a different frame in a time ruler

Note: *When using keyboard shortcuts to move in a time ruler, make sure the panel you want is active.*

❖ Do any of the following:

• Click the current time display of the monitor you want to cue, and type the new time. You don't need to type colons or semicolons. Numbers under 100 are interpreted as frames. (See "To move the current-time indicator using timecode" on page 109.)

• To go forward one frame, click the Frame Forward button ▐▶ , or hold down the K key and tap the L key.

• To go forward five frames, Shift-click the Frame Forward button ▐▶ .

• To go backward one frame, click the Frame Back button ◀▌ , or hold down the K key and tap the J key.

• To go backward five frames, Shift-click the Frame Back button ◀▌ .

• To go to the previous edit point in a sequence's targeted audio or video track, click the Go To Previous Edit Point button ▏◀ in the Program Monitor, or press Page Down with the Timeline panel or Program Monitor active.

• To go to the next edit point in a sequence's targeted audio or video track, click the Go To Next Edit Point button ▶▏ in the Program Monitor, or press Page Up with the Timeline panel or Program Monitor active.

• To go to the beginning of the clip or sequence, press Home.

• To go to the end of the clip or sequence, press End.

💡 *You can quickly and accurately move through frames in a sequence using the J, K, and L keys. The J key always moves the current-time indicator in reverse and the L key always moves it forward. The K key is a modifier and stop playback key. Press J to move backward at normal speed, press J and K to move backward slowly, or press K and tap the J key to move back a frame at a time. The K and L keys work in the same way to move forward.*

See also

"Navigating in the Timeline panel" on page 108

To jog or shuttle through frames

❖ Do one of the following:

• Drag the shuttle slider left to play backward, or right to play forward. Playback speed increases as you drag the slider farther from its center position. Releasing the slider returns it to the center position and stops playback.

• Drag the jog disk left or right, past the edge of the controller if necessary. If you drag to the edge of the screen without reaching the end of the clip or sequence, you can continue from the same time position by dragging from the jog disk again.

Shuttle and jog controls
A. Shuttle Slider B. Jog Disk

To match a frame

While editing in the Timeline panel, you might locate a frame in a sequence clip that you want to display in the Source Monitor.

❖ In the Timeline panel, position the current-time indicator over the desired frame in a clip and double-click the clip.

Note: If the sequence clip is already open in the Source Monitor or listed in the Source menu, the clip will display the last frame you viewed in the clip. To match the frame, close the clip in the Source Monitor before double-clicking in the Timeline panel.

Reference Monitor

Using a Reference Monitor

A Reference Monitor acts like a secondary Program Monitor. You can use a Reference Monitor to compare different frames of a sequence side by side, or to view the same frame of a sequence using different viewing modes.

You can cue the frame of a sequence displayed in the Reference Monitor independently from the Program Monitor. This way, you can cue each view to a different frame for comparison—to use the color matching filter, for example.

Alternatively, you can gang the Reference Monitor and Program Monitor together, so that they both show the same frame of a sequence and move in tandem. This is especially useful for color-correcting tasks. By setting the Reference Monitor's viewing mode to a waveform monitor or vectorscope, you can make adjustments to the color corrector or any other video filter more effectively.
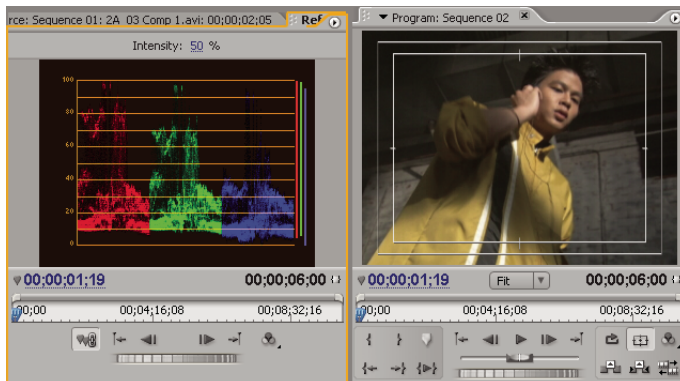
Using a Reference Monitor to aid in color correction

You can specify the Reference Monitor's quality setting, magnification, and viewing mode just as you would in the Program Monitor. Its time ruler and viewing area bar also work the same. But because it's for your reference and not for editing per se, the Reference Monitor contains controls for cueing to frames, not for playback or editing. When you gang the Reference Monitor and Program Monitor together, you can use the Program Monitor's playback controls. You may open only one Reference Monitor.

To open a Reference Monitor

❖ In the Program Monitor menu, choose New Reference Monitor. The Reference Monitor opens in a separate panel. If you want, you can drag the Reference Monitor's tab into the Source Monitor.

To gang the Reference Monitor and Program Monitor

You can gang the Reference Monitor and the Program Monitor so that changes in the edit point of one are reflected in the other.

❖ Do one of the following:

• In the Reference Monitor, click the Gang button .

• In the Reference Monitor's panel menu, choose Gang To Program Monitor.

• In the Program Monitor's panel menu, choose Gang To Reference Monitor.

Chapter 7: Editing a sequence

Editing overview

Assembling and editing a sequence

You create your program in Adobe Premiere Pro by assembling clips into a sequence. The workflow you choose depends on your preferences and the needs of your project. Here is a common editing workflow:

1. View and trim source clips in the Source Monitor.

Use the Source Monitor to view clips that you've captured and added to your project. As you view the clips, you can set In and Out points for the portion of each clip that you want to use in the sequence. (See "Trimming clips" on page 113.)

2. Assemble clips into a sequence.

Drag each clip individually to the Timeline panel, or automatically assemble clips selected in the Project panel. As you add individual clips, you can decide whether to add video, audio, or both to your sequence. (See "Adding clips to a sequence" on page 115.)

3. Retrim clips in the Timeline panel.

If you did not set precise In and Out points for a clip, or you decide to change them, you can retrim the clips in the Timeline panel. (See "To trim a clip in the Timeline panel" on page 122.)

4. Adjust clip attributes if necessary.

As you assemble your sequence, you may want to change the duration or the speed at which the clip plays. (See "Changing clip speed" on page 128.)

5. Rearrange clips.

After clips are placed in the Timeline panel, you can rearrange how they appear in the sequence. You might need to split a clip to use different effects, or extract or move a clip and close any resulting gaps in the sequence. (See "To split a single clip or multiple clips" on page 134 and "To move a clip in the Timeline panel" on page 135.)

6. Preview the sequence.

As you assemble a sequence, you can preview it in the Program Monitor. Adobe Premiere Pro can play back the assembled sequence in real time as you build it, but in some cases you may need to render the sequence for better playback. (See "Previewing at the project's full frame rate" on page 136.)

7. Assemble multiple sequences into a new sequence.

You can work with multiple sequences to help you keep your project manageable and organized. You can nest smaller sequences into a new sequence to assemble a longer sequence. (See "To use multiple sequences" on page 147.)

💡 *As you assemble and trim clips into a sequence, you can use the preset editing workspace to arrange Adobe Premiere Pro panels. Choose Window > Workspace > Editing.*

For a tutorial on trimming clips, go to Resource Center on the Adobe website. Adobe periodically provides updates to software and Help. To check for updates, click the Open Preferences Dialog button [icon] in Adobe Help Center, and then click Check For Updates. Follow the on-screen instructions.

Source clips, clip instances, and subclips

You can use clips as source clips, clip instances, subclips, or duplicate clips. You can edit all types of clips in sequences in the same way. The clip types differ in the following ways:

Source (master) clip The clip originally imported into the Project panel. It is listed in the Project panel only once by default. If you delete a source clip from the Project panel, all of its instances are also deleted.

Clip instance A dependent reference to a source clip, used in a sequence. Each time you add a clip to a sequence, you create another instance of the clip. A clip instance uses the name and source file reference used by its source clip. While clip instances are not listed in the Project panel, they are differentiated in the Source Monitor menu if you open instances there. The Source Monitor menu lists instances by name, sequence name, and In point.

Duplicate clip An independent copy of a source clip, which you create manually using the Edit > Duplicate command. Unlike a clip instance, a duplicate clip maintains its own reference to the original clip's source file on disk and exists as an additional clip in the Project panel. A duplicate clip is not deleted when you delete its original from the Project panel. Master and duplicate clips can be renamed independently.

Subclip A section of a master clip that references the master clip's media file. Use subclips to organize and manage your projects, especially when you need to use only sections of long master clips. (See "About subclips" on page 149.)

Working in the Timeline panel

About the Timeline panel

You assemble and rearrange sequences in the Timeline panel, which represents a sequence graphically, showing clips, transitions, and effects. A sequence can consist of multiple video and audio tracks running parallel in the Timeline panel.
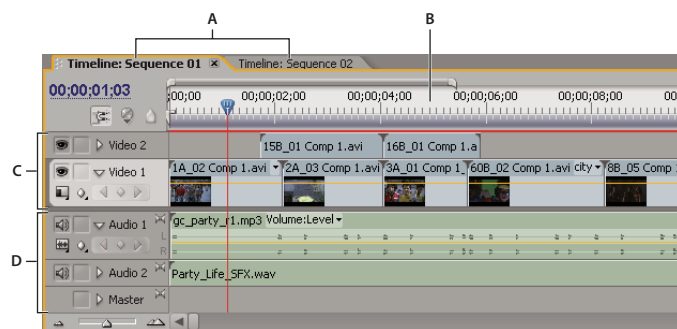
Timeline panel
A. Sequence tabs B. Time ruler C. Video tracks D. Audio tracks

Each sequence in a project can appear as a tab in a single Timeline panel, or in a separate Timeline panel. A sequence must contain at least one video track. Multiple video tracks are used to superimpose clips.

Sequences with audio tracks must also contain a master audio track, where the output of regular audio tracks is directed for mixing. Multiple audio tracks are used to mix audio. You can specify the type of audio channels supported by each audio track and decide how they are sent to a Master audio track. To achieve even greater control over the mixing process, you can create submix tracks.

See also

"About audio tracks in a sequence" on page 173

Navigating in the Timeline panel

The Timeline panel contains several controls for moving through the frames of a sequence.
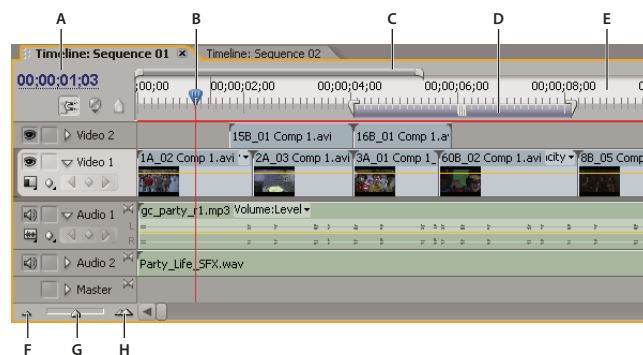
Time navigation controls in the Timeline panel
A. Current-time display B. Current-time indicator C. Viewing area bar D. Work area bar E. Time ruler F. Zoom out G. Zoom slider
H. Zoom in

Time ruler Measures sequence time horizontally, using the counting method specified in the project settings (although you may toggle to a counting method based on audio samples). Tick marks and numbers indicating the sequence time are displayed along the ruler and change according to the level of detail at which you view the sequence. The time ruler also displays icons for markers and the sequence In and Out points.

Current-time indicator (CTI) Sets the current frame in the sequence. The current frame displays in the Program Monitor. The current-time indicator is a light blue triangle in the ruler. A vertical line extends from the current-time indicator to the bottom of the time ruler. You can change the current time by dragging the current-time indicator.

Current time display Shows the timecode for the current frame in the Timeline panel. To move to a different time, click in the time display and enter a new time, or place the pointer over the display and drag left or right. You can change the display between timecode and the simple frame count by Ctrl-clicking the current time in either a monitor or the Timeline panel. (See "To move the current-time indicator using timecode" on page 109.)

Viewing area bar Corresponds to the visible part of the sequence in the Timeline panel. You can change the size and position of the viewing area bar to quickly view different parts of the sequence. The viewing area bar is located just above the time ruler.

Work area bar Specifies the area of the sequence that you want to preview or export. The work area bar is located in the lower portion of the time ruler. (See "To set the area to be previewed" on page 137.)

Zoom controls Change the scale of the time ruler to view the sequence in more or less detail. The zoom controls are located at the bottom left of the Timeline panel.

See also

"To play video in the Source and Program Monitors" on page 102

To position the current time in the Timeline panel

❖ Do any of the following:

• In the time ruler, drag the current-time indicator or click where you want to position the current-time indicator.

• Drag in the current time display.

• Click in the current time display, type a valid time, and press Enter. (See "To move the current-time indicator using timecode" on page 109.)

• Use any playback control in the Program Monitor.

• Press the Left or Right Arrow key to move the current-time indicator in the direction you want. Press Shift while pressing the arrow keys to move in increments of five frames.

See also

"To play video in the Source and Program Monitors" on page 102

To move the current-time indicator using timecode

❖ Click the timecode value, type a new time, and press Enter. You can use any of the following shortcuts when entering timecode:

Omit leading zeros For example, 0;0;12;3 becomes 00;00;12;03.

Omit semicolons (NTSC) or colons (PAL) For example, 1213 becomes 00;00;12;13 for NTSC projects, and 00:00:12:13 for PAL projects.

Enter values that exceed the normal values For example, if the current-time indicator is at 00;00;12;23, and you want to move 10 frames ahead, you can change the frame number to 00;00;12;33. The current-time indicator moves to 00;00;13;03.

Include a plus sign (+) or minus sign (–) A plus sign or minus sign before a number moves the current-time indicator ahead or back a specified number of frames. For example, +55 moves the current-time indicator ahead 55 frames.

Add a period A period before a number specifies an exact frame number, rather than its timecode value. For example, .1213 moves the current-time indicator to 00;00;40;13 in an NTSC project, and to 00:00:48:13 in a PAL project.

You can also position the Selection tool over the timecode value and drag to the left or right. The farther you drag, the more quickly the timecode changes.

To zoom into a sequence in the Timeline panel

❖ Do one of the following:

• Select the Zoom tool 🔍 , and then click or drag a marquee selection around the part of the sequence you want to see in more detail.

• Drag the zoom slider to the right, or click the Zoom In button 🔺.

• Drag the ends of the viewing area bar closer together.

To zoom out in the Timeline panel

❖ Do one of the following:

• Select the Zoom tool 🔍 , and then Alt-click an area in the Timeline panel.

• Drag the zoom slider to the left, or click the Zoom Out button ⬡ .

• Drag the ends of the viewing area bar farther apart.

To navigate the Timeline panel by screenfuls

❖ With the Timeline panel active, press the Up Arrow key to move left and the Down Arrow key to move right.

To snap to clip edges and markers

❖ Shift-drag the current-time indicator in the Timeline panel.

To zoom into a clip as you drag it

❖ Drag a clip to the Timeline panel, hold down the mouse button and press the plus key (+) to increase the zoom factor or press the minus key (–) to decrease it.

To view clip properties in a tool tip

❖ Position your cursor over the target clip in the Timeline panel.

A tool tip displays the clip name, its start and end points relative to the sequence, and its duration in the sequence. The tool tips also display changes you have made to speed (in percentages) and audio gain (in decibels). If you applied Frame Hold to a clip, the tool tip also displays the type of frame hold you applied.

To view timecode offset when dragging

❖ Drag the clip you want to reposition. A tool tip displays the number of frames as you drag. The window displays a negative number if you drag the clip toward the beginning of the sequence.

To view the total duration of selected clips

1 Make sure that the Info panel is visible. If it is not, choose Window > Info.

2 In either the Project panel or Timeline panel, select the clips for which you want to know the total duration. The Info panel displays the number of items selected and the total duration of those items. This information is useful if you want to paste clips into a specific area and need to know the exact duration of the target area or of the source clips.

Note: If you select noncontiguous clips in the Project panel, the Info panel displays the total duration of all the clips you select. However, if you select noncontiguous clips in a sequence, the Info panel displays the duration as a range, from In point of the first clip you selected, to the Out point of the last clip you selected. For the purpose of copying and pasting, the duration of a particular range is more important than the sum of all the clips' durations. If you copy and paste a noncontiguous group of sequence clips, the pasted clips will occupy the range as noted on the Info panel and the areas that you did not select will be black.

To view the keyframes for an effect property

1 Make sure that you choose one of the keyframe options from the Show Keyframes menu in either a video or audio track.

2 Right-click the clip containing the keyframe properties you want to view. Choose Show Clip Keyframes, and then choose the effect containing the keyframes you want to view.

To set a sequence's starting time

By default, each sequence's time ruler starts at zero and measures time according to the video frame count you specified in the project settings. However, you can change the starting time of the sequence's time ruler. For example, you may want to set the start time to match a master tape, which typically begins at 00;58;00;00, to accommodate a two-minute leader before the standard program start time of 01;00;00;00.

❖ In the Timeline panel menu, choose Sequence Zero Point, enter a starting timecode, and click OK. (The starting time must be a positive number.)

Working with tracks

To expand and resize a track

You can expand a track to display track controls. Increase the height of a track to better see icons and keyframes or to display larger views of video track thumbnails and audio track waveforms.

1 To expand or collapse a track, click the triangle to the left of the track name.

2 To resize the track, position the pointer in the track header area between two tracks so that the height adjustment icon ╪ appears, and then drag up or down to resize the track below (for video) or the track above (for audio).

Collapsed tracks always appear at the same height and cannot be resized.

💡 *You can expand an audio track to use the audio fade line for either individual clips in that track or for the entire audio track.*

See also

"About Fixed effects" on page 250

To select a video track's display style

1 If necessary, expand the track by clicking the triangle next to the track name.

2 Click the Set Display Style button at the left corner below the track name, and choose an option from the menu:

Show Head And Tail Displays a thumbnail image at the beginning and end of clips in the expanded track.

Show Head Only Displays a thumbnail image at the beginning of the clips in the expanded track.

Show Frames Displays thumbnail images along the entire duration of the clips in the expanded track. The number of thumbnail frames corresponds to the time units displayed in the time ruler.

Show Name Only Displays the name of clips in the expanded track, without thumbnail images.

### To show or hide audio waveforms in an audio track

1 If necessary, expand the track by clicking the triangle next to the track name.

2 Click the Set Display Style button 🔲, and, and choose an option from the menu:

Show Waveform Displays audio waveforms in clips.

Show Name Only Displays the name of audio clips without waveforms.

Note: For information about viewing and adjusting keyframes in video and audio tracks, see "Displaying keyframes in the Timeline panel" on page 232.

To resize the track header section

❖ Position the pointer over the right edge of the *track header* (where track names are listed) so that the resize icon ◄|► appears, and then drag the right edge.

The icons at the top of the track header limit its minimum width. The maximum width is about twice the minimum width.

To adjust visible area of video and audio tracks

1 Either in the track header area on the left or between the scroll bars on the right, position the pointer between the Video 1 and Audio 1 tracks.

2 When the height adjustment icon appears ⬍, drag up or down.

To exclude tracks in a sequence

You can exclude any track from previews and export. Clips in excluded video tracks do not appear in the Program Monitor. Clips in excluded audio tracks are not output to the Audio Mixer or to the speakers.

❖ Click to hide the Eye icon 👁 (for video) or the Speaker icon 🔊 (for audio) at the left edge of the track. (Each icon is a toggle switch. Click its box again to display the icon and include the track.)

Note: To exclude all video or all audio tracks, Shift-click to hide the Eye icon 👁 (for video) or the Speaker icon 🔊 (for audio). This excludes all tracks of the same type. (Each icon is a toggle switch. Shift-click its box again to display all the icons and include the tracks.)

To lock and unlock tracks

Locking an entire track is useful for preventing changes to any clips on that track while you work on other parts of the sequence. In the Timeline panel, a pattern of slashes appears over a locked track. Although clips in a locked track cannot be modified in any way, they are included when you preview or export the sequence. If you want to lock both a video track and a track with corresponding audio, lock each track separately. When you lock a target track, it is no longer the target; source clips cannot be added to the track until you unlock it and target it again.

💡 *You can lock a track to prevent it from shifting when you perform insert edits.*

❖ Click to display the Lock icon 🔒 next to the track name.
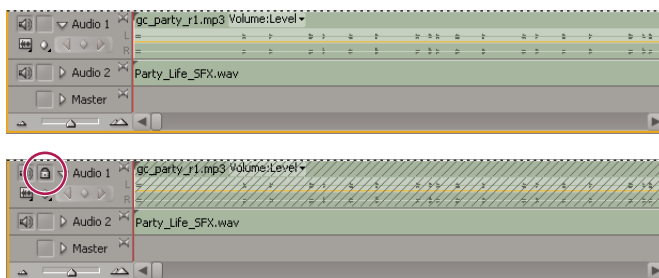
An unlocked track (top) and locked track (bottom)

To add tracks

New video tracks appear above existing video tracks, and new audio tracks appear below existing audio tracks. Deleting a track removes all clips in the track but does not affect source clips listed in the Project panel.

Note: You can add any number of tracks, limited only by your system's resources.

1 With the Timeline panel active, choose Sequence > Add Tracks.

2 In the Add Tracks dialog box, do any of the following:

• To add tracks, type the number of tracks you want to add in the Add field for video, audio, and audio submix tracks.

• To specify the placement of added tracks, choose an option from the Placement menu for each type of track added.

• To specify the type of audio track you want to add, choose an option from the Track Type menu for audio and audio submix tracks. (For more about audio channel types, see "About audio tracks in a sequence" on page 173.)

3 Click OK.

Note: An audio track can accept only audio clips that use the matching channel type—mono, stereo, or 5.1. If you're not sure what kind of audio your clips use, select the clip in the Project panel and read its information in the preview area.

You can add a track as you add a clip to the sequence. See "To add a track while adding a clip" on page 119.

To rename a track

1 Right-click the track's name and choose Rename.

2 Type a new name for the track, and press Enter.

To delete tracks

1 Click in the track header area to select the track you want to delete. You can target one video and one audio track at a time.

2 With the Timeline panel active, choose Sequence > Delete Tracks.

3 In the Delete Tracks dialog box, check the box for each type of track you want to delete.

4 For each checked item, specify which tracks you want to delete in the pop-up menu.

Trimming clips in the Source Monitor

Trimming clips

The first step in editing a sequence is specifying which portion of a clip you want to use. Setting a clip's In and Out points is a process called trimming. You define the first frame you want to include in a sequence by marking that frame as the clip's In point. Then you define the last frame you want to include by marking it as the Out point.

You can set In and Out points for a clip in the Source Monitor. After a clip is in a sequence, you can trim a clip's In or Out point by dragging its edge. Several specialized tools and techniques allow you to trim multiple edges at once, reducing the number of steps involved and maintaining the integrity of the sequence.

You can perform trimming tasks to a range of selected clips or grouped clips just as you would a single clip. The range or group acts as a single clip; you can trim its outer edges (the In point of the first clip and the Out point of the last clip), but not the interior edges (the In and Out points of each clip in the selected range or group).

To fine-tune trim edits in a sequence, you can open the Trim Monitor. The Trim Monitor's layout is similar to the Source and Program Monitors, but the Trim Monitor controls are optimized for precisely adjusting a cut point between clips in a sequence.

Similarly, you can set sequence In and Out points in the Program Monitor for adding clips to a sequence. Though they serve different purposes, controls for setting and cueing In and Out points work the same in both monitors. (See "To set sequence In and Out points" on page 119.)

To set clip In and Out points in the Source Monitor

1 Do one of the following:

- Double-click a clip in the Project panel to open it in the Source Monitor.

- Double-click a clip in the Timeline panel to open it in the Source Monitor.

2 Do one of the following:

- To mark an In point, go to the frame you want, and then click the Set In Point button ⚏ .

- To mark an Out point, go to the frame you want, and then click the Set Out Point button ⚏ .

To move In and Out points together

❖ In the Source Monitor's time ruler, drag the In/Out Grip (textured area at the center of the shaded span between the In and Out points). Make sure that you drag the textured area; otherwise, you simply cue the current-time indicator.

Dragging the In/Out Grip

💡 *This also works with sequence In and Out points using the Program Monitor or the Timeline panel.*

To view In and Out frames in the Source Monitor

After you set In and Out points in the Source Monitor, you can drag the area between the points to view the In point frame and the Out point frames alongside each other in the Source Monitor. Viewing frames this way is useful when you set In and Out points that are a specific duration and you want to locate a section of a clip that best fits within that duration. It is also useful for making quick adjustments to In and Out points.

Note: Viewing in and out frames this way works only with clips that you've opened in the Source Monitor from a sequence.

1 Set the In and Out points.

2 Drag the In/Out Grip (textured area at the center of the shaded span between the In and Out points).
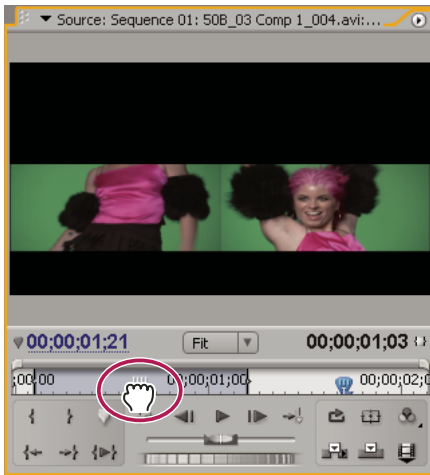
Viewing In and Out frames simultaneously in the Source Monitor

To cue to an In or Out point

You use the Source Monitor to cue a frame for a clip and the Program Monitor to cue the current frame for a sequence.

❖ Do one of the following:

• To cue the current time to an In point, click the Go To In Point button ⬅ .

To cue the current time to an Out point, click the Go To Out Point button ➡ .

• To cue the current time to an Out point, click the Go To Out Point button ➡ .

Note: To go to the beginning or end of clips in the sequence, use the Go To Next Edit button ➡ and the Go To Previous Edit button ⬅ .

To remove clip In and Out points

1 Double-click the clip in the Timeline panel to open it in the Source Monitor. If you want to remove In and Out points from a source clip, double-click it in the Project panel.

2 Choose Marker > Clear Clip Marker and then choose an option to clear the In point, the Out point, or both.

💡 *You can also clear an In or Out point by Alt-clicking the Set In Point button ⬍ or the Set Out Point button ⬍ in the Source Monitor.*

Assembling a sequence

Adding clips to a sequence

You can add clips to a sequence in the following ways:

• Drag the clip from the Project panel or Source Monitor to the Timeline panel or the Program Monitor.

• Use the Insert and Overlay buttons in the Source Monitor to add clips to the Timeline panel. Or use the keyboard shortcuts associated with those buttons.

• Automatically assemble a sequence according to how the clips are arranged in the Project panel.

About insert and overlay edits

An *overlay edit* adds a clip by replacing any frames already in a sequence starting from the edit point and extending for the length of the clip. Overlay is the default method when dragging a clip to a sequence or when rearranging clips in a sequence.
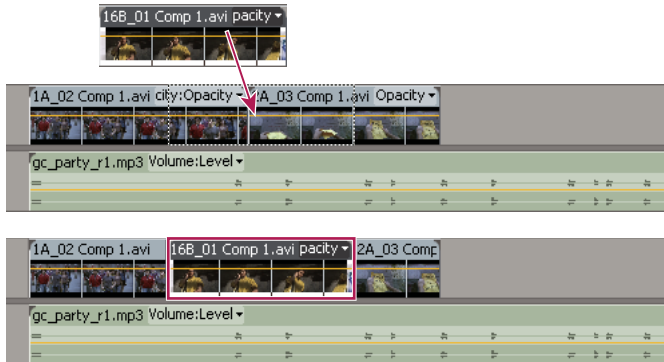
Adding a clip by overlaying existing clips

With an *insert edit*, adding a clip to the sequence forces any clips later in time to shift forward to accommodate the new clip. When dragging a clip, press the Ctrl key to shift into insert mode.
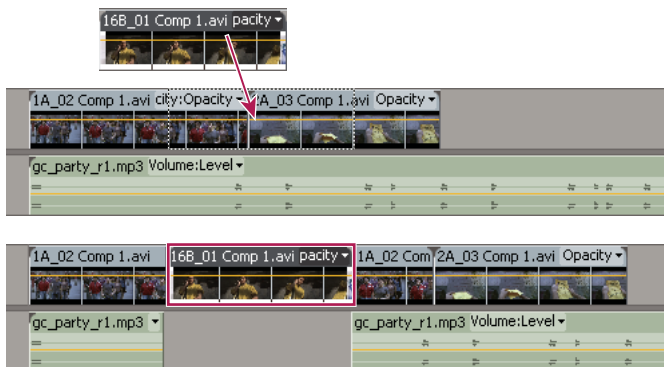
Adding a clip by inserting it between clips

An insert edit shifts clips in all unlocked tracks. To prevent an insert edit from shifting clips in another track, lock the track.

See also

"Targeting tracks" on page 117

To specify source tracks to add to a sequence

You can add the video track, the audio track, or both tracks of a clip to a sequence. When you drag a clip from the Project panel, you automatically add both tracks. If you want to add only one track, add it from the Source Monitor.

1 Open a clip in the Source Monitor.

2 In the Source Monitor, click the Take Video/Take Audio button until it displays the appropriate icon:

Take Video And Audio Includes both video and audio tracks in the sequence.

**Take Video** 🎬 Includes video only in the sequence.

Take Audio 🔊 Includes audio only in the sequence.

Note: Specifying a source track affects a clip only while adding it to a sequence. It doesn't change the state of clips or their source media.
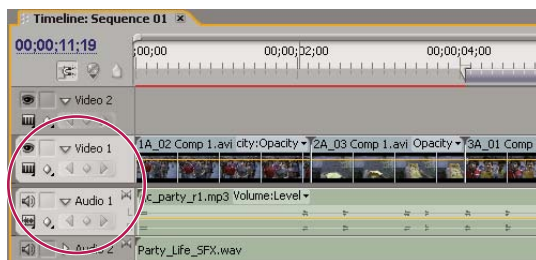
Targeting tracks

A sequence may contain several video and audio tracks. When you add a clip to a sequence, you need to specify which tracks it should occupy. The way you specify target tracks depends on the editing method you use.

• When you drag a clip to add it to a sequence, you target the track by dropping the clip into the track. If you are inserting the clip (pressing Ctrl as you drag), triangles show which tracks will have content shifted.
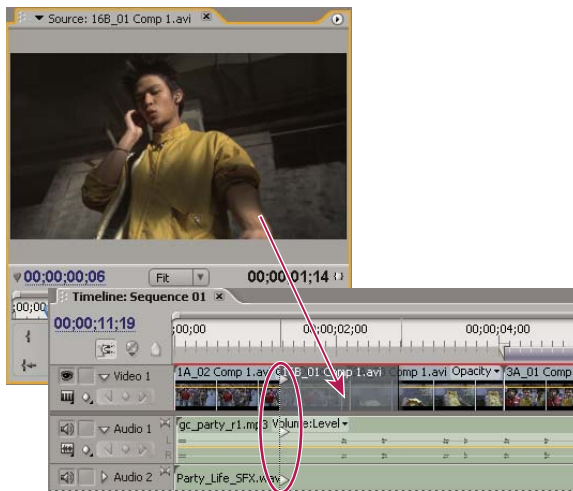
Targeting a track while dragging a clip to a sequence

• When you add clips to a sequence using the Source Monitor controls (or keyboard shortcuts), you must specify target tracks in advance. You can't target more than one video track or more than one audio track at a time. However, you can choose to target a video track only or an audio track only. Click the track you want to target in the track header area of the Timeline panel. The track header area appears highlighted and has rounded corners.

Targeting a track by clicking the track

If you overlay a clip, only the targeted track is affected, whether you drag the clip or use a Source Monitor's Overlay button.

If you insert a clip, the clip goes into the targeted track, and clips in any unlocked tracks shift to accommodate the insertion.

💡 *To insert a clip and not shift clips in other tracks, Ctrl-Alt-drag the clip into the track.*

You can drag video clips to any video track; however, you can drag audio clips only to a compatible audio track. Audio clips can't be added to the master audio track or submix tracks, and they can be placed only on audio tracks of the matching channel type: mono, stereo, or 5.1 (see "About audio tracks in a sequence" on page 173).

Clips with linked video and audio can be dragged to either a video or an audio track, but the clip's video and audio components appear separately, in the appropriate corresponding tracks.

Note: You can drag a clip to any unlocked, compatible track in a sequence, no matter which tracks are currently targeted. You can't target a locked track. Locking a target track deselects it as the target.

To add a clip to a sequence by dragging

The most direct way to assemble clips into a sequence is by dragging them from the Project panel or Source Monitor to an appropriate track in the Timeline panel.

The video and audio components of linked clips appear in corresponding tracks in the sequence (for example, Video 1 and Audio 1), unless the audio channel type of the clip is incompatible with the target track. In this case, the linked audio appears in the next compatible track, or a compatible track is created automatically.

Note: An audio clip dragged to an incompatible track automatically shifts to the next compatible track, even if the track is occupied by another audio clip. Therefore, take care not to disturb clips already in the sequence inadvertently.

The Program Monitor can help you determine where to position a clip you're adding to a sequence. During an overlay edit, it displays the frames in the sequence adjacent to the new clip's head and tail. During an insert edit, it displays the frames adjacent to the insertion point.

1 Open a clip in the Source Monitor, and mark its In and Out points. (See "To set clip In and Out points in the Source Monitor" on page 114.)

💡 *If you don't want to set In and Out points, you can drag the clip directly from a bin or the preview thumbnail in the Project panel.*

2 Specify the source tracks you want to include (video, audio, or video and audio) by clicking the Take Video/Take Audio button in the Source Monitor until its icon indicates the tracks you want to use. (See "To specify source tracks to add to a sequence" on page 116.)

3 To make clip edges align when you drag them, make sure that the Snap button 🔲 is active in the Timeline panel.

4 Do one of the following:

• To perform an overlay edit, drag the clip from the Source Monitor to an appropriate track in the Timeline panel at the point you want the clip to start. The destination area is highlighted, and the pointer appears with the Overlay icon 🔲 .

• To perform an insert edit, Ctrl-drag the clip from the Source Monitor to an appropriate track in the Timeline panel at the point you want the clip to start. The destination area is highlighted, and the pointer appears with the Insert icon 🔲 . Arrows appear at the insertion point in all tracks.

• To perform an insert edit and shift only target tracks, Ctrl+Alt-drag the clip from the Source Monitor to an appropriate track in the Timeline panel at the point you want the clip to start. The destination area is highlighted, and the pointer appears with the Insert icon 🔲 . Arrows appear at the insertion point only in the tracks to which the clip is added.

Note: You can also drag or Ctrl-drag a clip into the Program Monitor to overlay or insert a clip. Make sure the track you want is targeted in the Timeline panel and the current-time indicator is at the location you want to add the clip in the sequence. To prevent an insert edit from shifting clips in another track, lock the track.

See also

"Targeting tracks" on page 117

"About insert and overlay edits" on page 116

To add a track while adding a clip

❖ Drag a clip from the Project panel or Source Monitor into the blank space above the topmost video track (for a video or linked clip) or below the lowest audio track (for an audio or linked clip). Adobe Premiere Pro adds an audio track, a video track, or both, depending on the content of the source clip.

Note: If the sequence doesn't have an unlocked track of the correct media type (for example, a stereo audio track for a stereo source clip), a new track is created to accommodate the clip.

To set sequence In and Out points

You can use In and Out points in a sequence to help you place and rearrange clips.

1 Navigate to the In point in the Timeline panel and click the Set In Point button ⁅ in the Program Monitor.

2 Navigate to the Out point in the Timeline panel and click the Set Out Point button ⁆ .

You can move the In and Out points together without affecting the duration by dragging the In/Out Grip (textured area at the center of the shaded span between the In and Out points) in the Program Monitor or Timeline panel.

To set sequence In and Out points around a selection

1 In the Timeline panel, select a clip or gap in the sequence.

2 Choose Marker > Set Sequence Marker > In and Out Around Selection. This sets sequence In and Out points that match the selection's In and Out points.

This command is particularly useful when replacing or removing clips in the sequence using three- and four-point editing methods. (See "Three-point and four-point edits" on page 119.)

To remove sequence In and Out points

Note: Sequence In and Out points are automatically removed when you perform a lift or extract edit from the Program Monitor.

1 Make sure that the sequence is open in the Program Monitor.

2 Choose Marker > Clear Sequence Marker, and then choose an option to clear the In point, the Out point, or both.

You can also clear an In or Out point by Alt-clicking the Set In button ⁅ or the Set Out button ⁆ .

Three-point and four-point edits

The Source and Program Monitors provide controls to perform three-point and four-point edits—standard techniques in traditional video editing.

In a *three-point* edit, you mark either two In points and one Out point, or two Out points and one In point. You don't have to actively set the fourth point; it's inferred by the other three. For example, in a typical three-point edit you would specify the starting and ending frames of the source clip (the source In and Out points), and when you want the clip to begin in the sequence (the sequence In point). Where the clip ends in the sequence—the unspecified sequence Out point—is automatically determined by the three points you defined. However, any combination of three points accomplishes an edit. For example, sometimes the point a clip ends in a sequence is more critical than where it begins. In this case, the three points include source In and Out points, and a sequence Out point. On the other hand, if you need the clip to begin and end at particular points in the sequence—say, perfectly over a line of voice-over narration—you could set two points in the sequence, and only one point in the source.

In a *four-point* edit, you mark source In and Out points and sequence In and Out points. A four-point edit is useful when the starting and ending frames in both the source clip and sequence are critical. If the marked source and sequence durations are different, Adobe Premiere Pro alerts you to the discrepancy and provides alternatives to resolve it.

See also

"To set clip In and Out points in the Source Monitor" on page 114

"Targeting tracks" on page 117

"To specify source tracks to add to a sequence" on page 116

To perform a three-point edit

1 Specify the clip's source tracks (video, audio, or both).

2 Target the tracks in the Timeline panel in which you want to add the clip.

3 In the Source and Program Monitors, mark any combination of three In and Out points.

4 Do one of the following:

• To perform an insert edit, click the Insert button .

• To perform an insert edit and shift clips in target tracks only, Alt-click the Insert button .

• To perform an overlay edit, click the Overlay button .

To perform a four-point edit

1 Specify the clip's source tracks (video, audio, or both).

2 Target the tracks in the Timeline panel in which you want to add the clip

3 Using the Source Monitor, mark an In point and an Out point for the source clip.

4 In the Program Monitor, mark an In point and an Out point in the sequence.

5 Do one of the following:

• To perform an insert edit, click the Insert button

• To perform an insert edit and shift clips in target tracks only, Alt-click the Insert button .

• To perform an overlay edit, click the Overlay button .

6 If the marked source and program durations differ, select an option when prompted:

Change Clip Speed (Fit to Fill) Maintains the source clip's In and Out points, but changes the clip's speed so that its duration matches the duration determined by the sequence In and Out points.

Trim Clip's Head (Left Side) Automatically changes the source clip's In point so that its duration matches the duration determined by the sequence In and Out points.

Trim Clip's Tail (Right Side) Automatically changes the source clip's Out point so that its duration matches the duration determined by the sequence In and Out points.

Ignore Sequence In Point Disregards the sequence In point you set, and performs a three-point edit.

Ignore Sequence Out Point Disregards the sequence Out point you set, and performs a three-point edit.

To add clips to a sequence automatically

You can quickly assemble a rough cut or add clips to an existing sequence. The automated sequence can include the default video and audio transitions.

1 Set In and Out points to define each clip's starting and ending points.

2 Arrange clips in the Project panel. You can add the clips to the sequence in either the order you select them, or in the order that they are arranged in a bin. You can also add sequences or clips in nested bins.

You can arrange clips in a bin in storyboard fashion by setting the Project panel to icon view. (See "To change Project panel views" on page 92.)

3 Select the clips in the Project panel. Either Ctrl-click them in the order you want or by drag a selection marquee around them.

4 In the Project panel, click the Automate To Sequence button ⬚⬚⬚ .

5 Set the following options in the Automate To Sequence dialog box, and then click OK:

Ordering Specifies the method used to determine the order of the clips when they are added to the sequence. If you choose Sort Order, clips are added in the order they're listed in the Project panel: from top to bottom in List view; or from left to right, top to bottom in Icon view. If you choose Selection Order, clips are added according to the order in which you selected them in the Project panel.

Placement Specifies how clips are placed in the sequence. If you choose Sequentially, clips are placed one after another. If you choose At Unnumbered Markers, clips are placed at unnumbered sequence markers. Choosing At Unnumbered Markers makes the Transitions options unavailable.

Method Specifies the type of edit to perform. Choose Insert Edit to add clips to the sequence starting at the sequence's current time using insert edits, which shift existing clips forward in time to accommodate the new material. Choose Overlay Edit to use overlay edits, which allow the new material to replace clips already in the sequence.

Note: The Automate To Sequence command disregards target tracks and always uses video1 and audio1.

Clip Overlap Specifies the duration of the transition and how much to adjust the clips' In and Out points to compensate for it when Apply Default Audio Transition or Apply Default Video Transition is selected. For example, a value of 30 frames trims the clips' In and Out points 15 frames at each edit, where a 30-frame transition is added. The default value of this option is 15 frames. A pop-up menu lets you set the units to frames or seconds.

Apply Default Audio Transition Creates an audio crossfade at each audio edit, using the default audio transition (defined in the Effects panel). This option is available only when audio tracks are present in selected clips, and the Placement option is set to Sequentially. It has no effect when the Clip Overlap option is set to zero.

Apply Default Video Transition Places the default transition (defined in the Effects panel) at each edit. This option is available only when the Placement option is set to Sequentially, and has no effect when the Clip Overlap option is set to zero.

Ignore Audio Ignores the audio in clips selected to be automated to the sequence.

Trimming clips in a sequence

To trim a clip in the Timeline panel

You can change a clip's In point or Out point by dragging its edge in the Timeline panel. As you drag, the current In or Out point appears in the Program Monitor. A tool tip displays the number of frames that you are trimming: a negative value if you are dragging the edge toward the beginning of the sequence and a positive number if you are dragging toward the end of the sequence. You cannot trim past the original In and Out points of the source footage.

❖ Click the selection tool ▸ and do one of the following:

• To edit the In point, drag the left edge of the clip once the Trim-in icon ⊹ appears.

• To edit the Out point, drag the right edge of the clip once the Trim-out icon ⊹ appears.

Note: To trim only one track of a linked clip, press Alt as you click with a Trim icon. You do not need to hold down the Alt key once you initiate the trim.
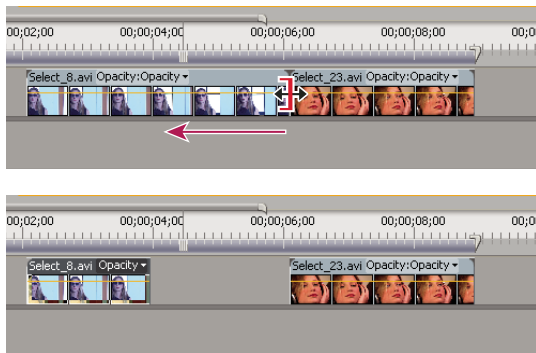
Trimming a clip

Trimming in this way affects only a single clip edge and doesn't affect adjacent clips. To trim multiple edges at once or to shift adjacent clips, see "Trimming using ripple and rolling edits" on page 122 and "Trimming using slip and slide edits" on page 124.

💡 *Press Ctrl as you drag using the Selection tool to switch to the Ripple Edit tool.*

Trimming using ripple and rolling edits

When you want to adjust the cut, or edit point, between two clips, use variations of simple trimming known as *rolling edits* and *ripple edits*. By using specialized tools, you can make adjustments in a single action that would otherwise require multiple steps to accomplish. When you perform ripple and rolling edits, the affected frames appear in the Program Monitor side by side.
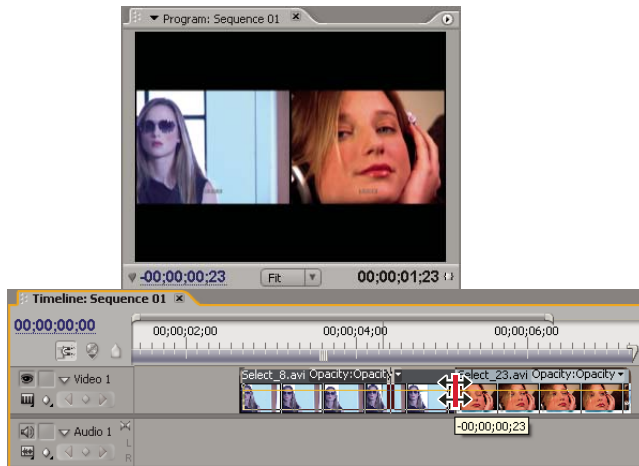
Program Monitor during a ripple or rolling edit

A rolling edit trims an adjacent Out point and In point simultaneously and by the same number of frames. This effectively moves the edit point between clips, preserving other clips' positions in time and maintaining the total duration of the sequence. Pressing Alt when you begin to perform a rolling edit ignores the link between video and audio (known as an *L-cut* or *J-cut*).

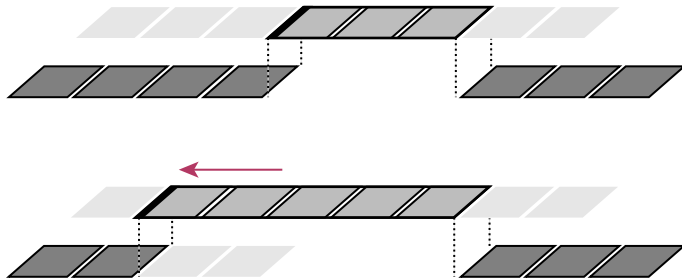*In this rolling edit, the edit point is dragged earlier in time—shortening the previous clip, lengthening the next clip, and maintaining the program duration.*

A ripple edit trims a clip and shifts subsequent clips in the track by the amount you trim. Shortening a clip by ripple editing shifts all clips after the cut back in time; conversely, extending a clip shifts the clips that follow the cut forward in time. When you're making a ripple edit, empty space on one side of the cut is treated as a clip and shifts in time just as a clip would be. Pressing Alt when you begin to perform a ripple edit ignores the link between video and audio.
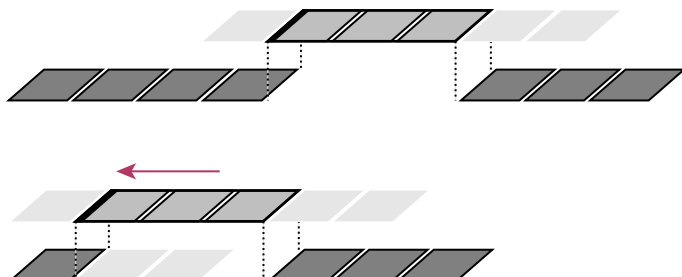
In this ripple edit, the edit point is dragged earlier in time—shortening the preceding clip and the total program duration.

See also

"Using the Trim Monitor" on page 126

To perform a rolling edit

1 Select the Rolling Edit tool ⬚⬚.

2 Drag left or right from the edge of the clip you want to change. The same number of frames added to the clip are trimmed from the adjacent clip. (Alt-drag to affect only the video or audio portion of a linked clip.)
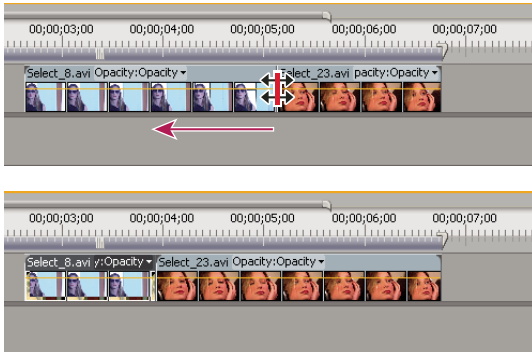
Timeline panel during (above) and after (below) a rolling edit

To perform a ripple edit

• Select the Ripple Edit tool ⬚⬚.

• Position the pointer over the In or Out point of the clip you want to change until the Ripple-in icon ⬚⬚ or the Ripple-out icon ⬚⬚ appears, and drag left or right. Subsequent clips in the track shift in time to compensate for the edit, but their durations remain unchanged. (Alt-drag to affect only the video or audio portion of a linked clip.)
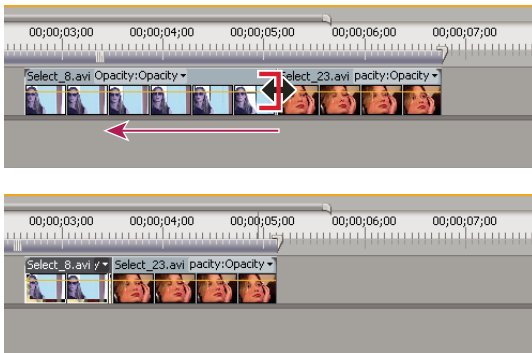
Timeline panel during (above) and after (below) a ripple edit

💡 *When using the Selection tool, you can toggle from the Trim-in or Trim-out icon to a Ripple edit icon by pressing the Ctrl key. Release Ctrl to revert to the Selection tool.*

Trimming using slip and slide edits

Just as ripple and rolling edits allow you to adjust a cut between two clips, slip and slide edits are useful when you want to adjust two cuts in a sequence of three clips. When you use the Slip or Slide tool, the Program Monitor displays the four frames involved in the edit side by side, except when editing audio only.
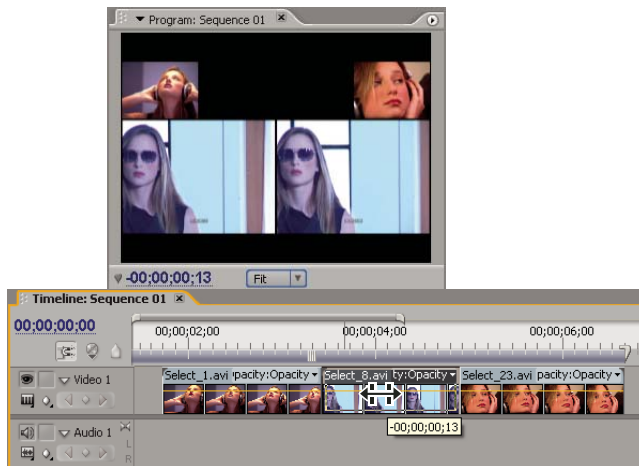
Program Monitor during a slip or slide edit

Note: *Though Slip and Slide tools are typically employed on the center of three adjacent clips, each tool functions normally even if the clip is adjacent to a clip on one side and blank space on the other.*

A slip edit shifts a clip's In and Out points forward or backward by the same number of frames in a single action. By dragging with the Slip tool, you can change a clip's starting and ending frames without changing its duration or affecting adjacent clips.
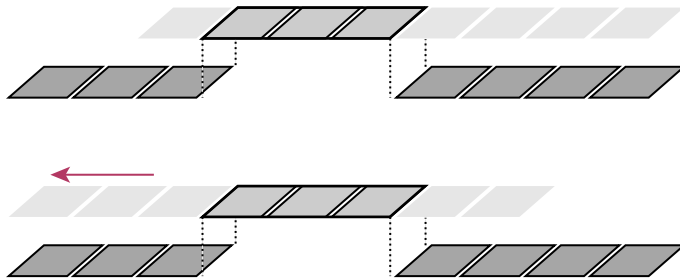
In this slip edit, a clip is dragged left, moving its source In and Out points earlier in time.

A slide edit shifts a clip in time while trimming adjacent clips to compensate for the move. As you drag a clip left or right with the Slide tool, the Out point of the preceding clip and the In point of the following clip are trimmed by the number of frames you move the clip. The clip's In and Out points (and hence, its duration) remain unchanged.
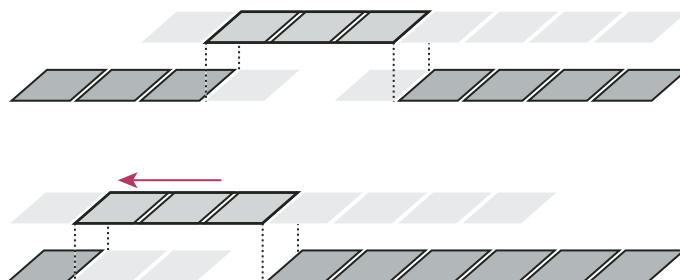
In this slide edit, a clip is dragged left so that it starts earlier in the sequence, shortening the preceding clip and lengthening the following clip.

To perform a slip edit

1 Select the Slip tool ↔ .

2 Position the pointer on the clip you want to adjust, and drag left to move the In and Out points earlier in the clip, or drag right to move the In and Out points later in the clip.

Adobe Premiere Pro updates the source In and Out points for the clip, displaying the result in the Program Monitor and maintaining the clip and sequence duration.

To perform a slide edit

1 Select the Slide tool ![icon] .

2 Position the pointer on the clip you want to adjust, and drag left to move the Out point of the preceding clip and the In point of the following clip earlier in time, or drag right to move the Out point of the preceding clip and the In point of the following clip later in time.

When you release the mouse button, Adobe Premiere Pro updates the In and Out points for the adjacent clips, displaying the result in the Program Monitor and maintaining the clip and sequence duration. The only change to the clip you moved is its position in the sequence.

To view source timecode when trimming

You can display the source timecode in the Program Monitor preview for clips in a sequence as you edit:

• If you trim a clip, the clip's source timecode is displayed.

• If you perform a slide edit, the new source media In and Out points for the adjacent clips are displayed.

• If you perform a slip edit, the clip's new source media In and Out points are displayed.

❖ Choose Timecode Overlay During Edit from the Program Monitor panel menu. A check mark indicates that the command is selected.

Using the Trim Monitor

The Trim Monitor displays clip In and Out points at a cut so that you can see precisely which frames you are cutting. The left monitor shows the clip to the left of the edit point, and the right monitor shows the clip to the right of the cut.

You can perform ripple or rolling edits at any edit point in the sequence, for any target track. The sequence updates as you perform the edit.

• To open the Trim Monitor, click the Trim button ![icon] at the bottom of Program Monitor.

• To cancel an edit, press Ctrl+Z, or use the History palette.

• To preview the edit, click the Play Edit button ![icon] . Click the Loop button ![icon] to continuously preview the edit.

• To close the Trim Monitor, click the close box ![icon] in the upper right corner of the Trim Monitor.

• To set the number of frames that will be trimmed when you use the Multiple-Frame Trim-in button **-5** or the Multiple-Frame Trim-out button **+5**, choose Edit > Preferences > Trim.

To display the edit point you want to trim

1 Select the target tracks by clicking near the tracks' names in the track header area in the Timeline panel.

2 In the Trim Monitor, click the Go To Previous Edit Point ![icon] or Go To Next Edit Point ![icon] button. The frames on either side of the new edit point position appear in the Trim Monitor.

To perform a ripple edit using the Trim Monitor

1 Display the edit point in the Trim Monitor.

2 Do any of the following:

• Position the pointer in the left or right image so that it becomes the Trim-out icon ✦ or Trim-in icon ✦ respectively, and drag left or right to ripple-edit the corresponding clip.

• Drag the timecode display under the left or right image to trim the corresponding clip.

• Drag the left or right jog disk to trim the corresponding clip.

• Drag the Outgoing Out Point icon ┇ in the left view's time ruler, or drag the Incoming In Point icon ┇ in the right view's time ruler.

• Drag the Out Shift or In Shift timecode number left or right to ripple-edit the corresponding clip.

• Click the left clip's timecode display (for the left clip's Out point) or the right clip's timecode display (for the right clip's In point), type a valid timecode number to trim the corresponding clip to that frame, and press Enter.

• Click the Out Shift display (for the left clip's Out point) or the In Shift display (for the right clip's In point), type a negative number (to trim left) or a positive number (to trim right), and press Enter.

To perform a rolling edit using the Trim Monitor

❖ Do any of the following:

• Position the pointer between the video images so that it changes into the Rolling Edit tool ⫶⫶ ; then drag left or right.

• Drag the center timecode display left or right.

• Drag the center jog disk left or right.

• Click the timecode display between the views, type a valid timecode number to trim the edges of both clips to that frame, and press Enter.

• Select the boxed number above the center jog disk, type a negative number to trim both clips left or type a positive number to trim both clips right, and press Enter.

• Click the button that corresponds with the number of frames you want to rolling-edit. The –1 and –5 buttons trim both clips left; +1 and +5 trim both clips right.

Note: The large trim offset number is 5 frames by default, but you can set it to any number by specifying a number in the trim preferences. Choose Edit > Preferences > Trim.

Changing clip attributes

To change duration

The duration of a video or audio clip is the length of time it plays from its first frame (In point) to its last frame (Out point). Altering a clip's In or Out points, changes the clip's duration. You can also set a duration for the clip, trimming the end of the clip to the specified duration.

Still image durations can be set like other clips, except that still images can have any duration. To set a default still image duration, see "To change the default duration for still images" on page 88.

1 In the Timeline panel or Project panel, select a clip.

2 Do one of the following:

• To change duration numerically, choose Clip > Speed/Duration, click the link button � 50 to unlink speed and duration, type a new duration, and click OK.

• To change duration visually in the Timeline panel, move the Selection tool over an edge of the clip so that it changes to the Trim Out or Trim In tool, and drag the edge. If you are making the clip longer, the source clip must contain enough additional frames beyond its source In or Out point to accommodate the adjustment.

If you want to trim a clip edge that's already adjacent to another clip, use the methods described in "Trimming using ripple and rolling edits" on page 122.

If you set a clip in the Timeline panel to the duration you require, but you don't like where the clip begins and ends in relation to the adjacent clips, you can use the Slip tool to adjust the clip without changing the clip's program In and Out point or duration. (See "To perform a slip edit" on page 125.)

See also

"Changing clip speed" on page 128

Changing clip speed

The *speed* of a clip is the playback rate compared to the rate at which it was recorded. Initially, a clip plays back at its normal, 100% speed. (Even if the source footage's frame rate doesn't match the project's, the project automatically reconciles the difference and plays back the clip at its proper speed.)

Changing a clip's speed causes its source frames to be either omitted or repeated during playback, thereby making the video or audio play faster or slower. So naturally, a change in speed results in a corresponding change in duration.

When you change the speed of a clip containing interlaced fields, you may need to adjust how Adobe Premiere Pro treats the fields, especially when the speed drops below 100% of the original speed. (See "To create interlaced or non-interlaced clips" on page 130.)

You can also set a clip's speed to fill a duration by performing a four-point edit.

In the Timeline panel, clips with speed changes are indicated as a percentage of the original speed.

To change a clip's speed

1 Select a clip in the Project panel or Timeline panel.

2 Choose Clip > Speed/Duration.

3 Set any of the following options, and then click OK:

Speed Sets the playback speed of the clip as a percentage of its original speed. To change the speed without affecting the duration, click the link button � 50 to unlink speed and duration.

Duration Sets the duration of the clip. To change the duration without affecting the speed, click the link button � 50 to unlink speed and duration.

Reverse Speed Reverses the clip' video frames and audio.

Maintain Audio Pitch Preserves the audio pitch when changing the speed of the clip.

To change a clip's speed using the Rate Stretch tool

You can change a clip's speed to fit a duration.

❖ Select the Rate Stretch tool ↖, and drag either edge of a clip in the Timeline panel.
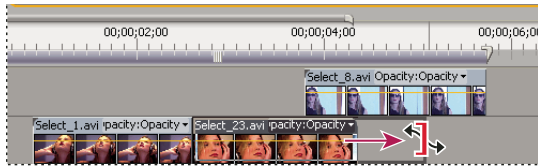
Changing clip speed using the Rate Stretch tool

To blend frames for smooth motion

Motion in a clip may appear jerky when you change the speed of a clip, or output to a different frame rate. Make sure that frame blending is on to create new interpolated frames that smooth the motion.

❖ Choose Clip > Video Options > Frame Blend.

To freeze a video frame

You can freeze one frame of a clip, so that only that frame appears for the duration of the clip, as if you imported the frame as a still image. You can freeze on the clip's In point, Out point, or at marker 0 (zero), if present.

1 Select a clip in the Timeline panel.

2 To freeze a frame other than the In or Out point, open the clip in the Source Monitor, and set Marker 0 (zero) to the frame you want to freeze.

3 Choose Clip > Video Options > Frame Hold.

4 Select Hold On, and select the frame you want to hold from the menu.

5 Specify the following options as necessary, and then click OK:

Hold Filters Prevents keyframed effect settings (if any are present) from animating during the duration of the clip. Effect settings use the values at the held frame.

Deinterlace Removes one field from an interlaced video clip and doubles the remaining field, so that field artifacts (such as *combing*) are not apparent in the freeze frame.

Note: If you set the hold frame on an In or Out point, changing the edit point doesn't change the freeze frame. If you set the hold on Marker 0, moving the marker changes the frame displayed

See also

About interlaced and noninterlaced video

Video can be either *interlaced* or *noninterlaced*.

Each interlaced video frame consists of two *fields*. Each field contains half the number of horizontal lines in the frame; the *upper field* (or *Field 1*) contains all of the odd-numbered lines, and the *lower field* (or *Field 2*) contains all of the even-numbered lines. An interlaced video monitor displays each frame by first drawing all of the lines in one field and then drawing all of the lines in the other field. *Field order* specifies which field is drawn first. In NTSC video, new fields are drawn to the screen approximately 60 times per second, which corresponds to a frame rate of approximately 30 frames per second.
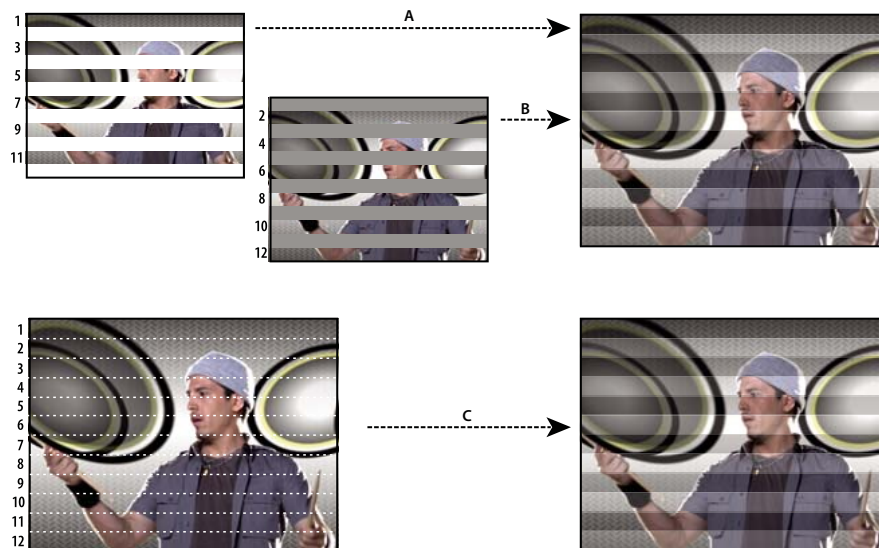
Interlaced scanning of interlaced video fields compared with progressive scanning of a noninterlaced video frame.
A. *For interlaced video, first, the entire upper field is drawn to the screen, from top to bottom, in one pass.* ***B.*** *Next, the entire lower field is drawn to the screen, from top to bottom, in one pass.* ***C.*** *For noninterlaced video, the entire frame is drawn to the screen, from top to bottom, in one pass.*

Most broadcast video is interlaced, though emerging high-definition television standards have interlaced and noninterlaced variants.

Noninterlaced video frames are not separated into fields. A *progressive-scan* monitor will display a noninterlaced video frame by drawing all of the horizontal lines, from top to bottom, in one pass. Computer monitors are almost all progressive-scan monitors, and most video displayed on computer monitors is noninterlaced.

The terms *progressive* and *noninterlaced* are thus closely related and are often used interchangeably, but *progressive* refers to the recording or drawing of the scan lines by a camera or monitor, whereas *noninterlaced* refers to the fact that the video data itself is not separated into fields. For example, it is possible with some modern cameras to use progressive scanning to record two simultaneous fields per frame of interlaced video.

To create interlaced or non-interlaced clips

Ordinarily, interlaced fields aren't apparent to a viewer. Because each field captures the subject at a slightly different moment in time, playing a clip in slow-motion, creating a freeze frame, or exporting a frame as a still image makes the two fields discernible. In these circumstances, it's usually preferable to *deinterlace* the image—that is, eliminate one field and create the missing field either by duplicating or interpolating the lines of the remaining field.

Another unwanted effect can arise from inadvertently reversing the *field dominance*, or the order in which the fields are recorded and displayed. When the field dominance is reversed, motion appears jerky because the fields no longer appear chronologically. Fields can become reversed in the following situations:

• The field dominance of the original videotape was the opposite of the field dominance of the video-capture card used to capture the clip.

• The field dominance of the original videotape was the opposite of the field dominance of the video-editing or animation software that last rendered the clip.

• You have set an interlaced clip to play backward.

You can process fields for an interlaced clip in the sequence so that the clip's picture and motion quality are preserved in situations such as changing the clip speed, playing a clip backward, or freezing a video frame.

1 Select a clip in the Timeline panel, and choose Clip > Video Options > Field Options.

2 Select Reverse Field Dominance to change the order in which the clip's fields appear. This option is useful when the field dominance of the clip doesn't match your equipment or when you play a clip backward.

3 For Processing Options, select one of the following choices:

None Doesn't process the clip's fields.

Interlace Consecutive Frames Converts pairs of consecutive progressive-scan (noninterlaced) frames into interlaced fields. This option is useful for converting 60-fps progressive-scan animations into 30-fps interlaced video, because many animation applications don't create interlaced frames.

Always Deinterlace Converts interlaced fields into whole progressive-scan frames. Adobe Premiere Pro deinterlaces by discarding one field and interpolating a new field based on the lines of the remaining field. It keeps the field specified in the Field Settings option in the Project Settings.

If you specified No Fields, Adobe Premiere Pro keeps the upper field unless you selected Reverse Field Dominance, in which case it keeps the lower field. This option is useful when freezing a frame in the clip.

Flicker Removal Prevents thin horizontal details in an image from flickering by slightly blurring the two fields together. An object as thin as one scan line flickers because it can appear only in every other field.

4 Click OK.

To improve the appearance of video when the clip's speed is not 100%, turn on frame blending. Choose Clip > Video Options > Frame Blend.

Working with clips in a sequence

To view the source of a clip in a sequence
❖ Right-click a clip in a sequence, and choose Reveal In Project.

To select one or more clips

When you want to perform an action that affects a clip as a whole, such as applying an effect, deleting a clip, or moving a clip in time, first select the clip in the Timeline panel. The toolbox contains selection tools that can handle various selection tasks.

❖ Do any of the following:

• To select a single clip, use the Selection tool ▶ and click a clip in the Timeline panel.

• To select only the audio or video portion of a clip, use the Selection tool ▶ and Alt-click that portion.

• To select multiple clips by clicking, use the Selection tool ▶ and Shift-click each clip you want to select. (Shift-click a selected clip to deselect it.)

• To select a range of clips, click in an empty area of the sequence under the time ruler, and then drag a rectangle (marquee selection) that includes any part of the clips you want to select.

• To add or subtract a range of clips in the current selection, Shift-drag a marquee around clips. Shift-dragging a marquee that includes unselected clips adds them to the current selection. Shift-dragging a marquee that includes selected clips deselects them.
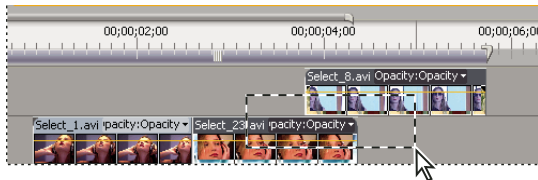
Selecting a range of clips by dragging a marquee

• To select all clips that exist on and after a certain time on one track, select the Track Select tool ⊞ and click the clip at the beginning of the time span you want to select. Shift-click with the tool to select clips in all tracks.
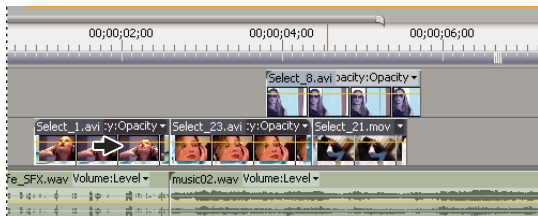
Selecting clips with the Track Select tool

• To select clips in a track independently of its linked video or audio, Alt-click using the Track Select tool ⊞.

To copy and paste at the current-time indicator

You can copy and paste multiple clips at one time. The relative spacing (both horizontal spacing in time, and vertical spacing in tracks) of clips is maintained.

1 Select one or more clips in the sequence, and choose Edit > Copy.

2 In the Timeline panel, position the sequence current-time indicator to the point you want to paste a copy of the clip.

3 Select a target track compatible with the copied clip.

4 Do one of the following:

• To overlay the pasted clips, choose Edit > Paste.

• To insert the pasted clips, choose Edit > Paste Insert.

To enable or disable a clip

You can disable a clip while you try out a different editing idea, or to shorten processing time when working on a complex projects. Disabled clips do not appear in the Program Monitor or in a preview or video file that you export. As long as you have not locked the track containing a disabled clip, you can still make changes to it. If you want to disable all clips on the same track, exclude the entire track instead. See "To exclude tracks in a sequence" on page 112.

❖ Select one or more clips in the Timeline panel and choose Clip > Enable. A check mark next to the command indicates that the selected clips is enabled. Disabled clips appear dimmed in the Timeline panel.

To copy attributes

If you have applied settings to a clip and want to use the same settings in one or more other clips, you can easily copy the settings. For example, you might want to apply identical color correction to a series of clips shot in similar lighting conditions. Settings intrinsic to the source clip—motion, opacity, volume—replace those in the destination clips. All other effects (including keyframes) are added to the list of effects already applied to the destination clips.

Note: You can also copy and paste keyframes from one effect parameter to another compatible effect parameter. See "Copying and pasting keyframes in the Timeline panel" on page 241.

1 Select a clip, and choose Edit > Copy.

2 Select one or more clips in the Timeline panel.

3 Choose Edit > Paste Attributes.

To group clips

You can *group* multiple clips so that you can move, disable, copy, or delete them together. Both audio and video tracks of a linked clip are included when you group it with other clips.

You can't apply clip-based commands, such as the Speed command, or effects to the group, though you can select individual clips in the group and apply effects.

You can trim the exterior edges of the group (the head of the first clip in a group or the tail of the last clip), but you can't trim any of the interior In and Out points.

• To group clips, select multiple clips, and choose Clip > Group.

• To ungroup clips, select a group clip, and choose Clip > Ungroup.

• To select one or more clips in a group of clips, Alt-click a single clip in a group. Shift+Alt-click to select additional clips in a group.

To enable and disable the snap feature

To make it easier to align clips with one another or with particular points in time, you can activate the snap feature. When you move a clip with snap on, it automatically aligns with, or snaps to the edge of another clip, to a marker, to the start and end of the time ruler, or to the current-time indicator. Snapping also helps to ensure you don't inadvertently perform an insert or overlay edit when dragging. As you drag clips, a vertical line with arrows appears and indicates when clips are aligned.

❖ At the upper left of the Timeline panel under the Sequence tab, click the Snap button ![snap] to select it. Click it again to deselect it.

To snap a clip

You can snap a clip's edge or marker to the edge of another clip, marker, or the current-time indicator.

1 Make sure that the Snap button ![snap] is selected in the Timeline panel.

2 Drag the edge of a clip close to the edge of another clip or a marker or the current-time indicator. A vertical line appears when alignment occurs.

💡 *You can toggle the snap feature using a keyboard shortcut (S) even during an editing operation, such as moving or trimming a clip.*

Aligning clips with the snap feature enabled

Rearranging clips in a sequence

To split a single clip or multiple clips

You can use the Razor tool to split a clip into two clips, or to cut across clips in several tracks at once. Splitting a clip creates a new and separate instance of the original clip, and any linked clips. The resulting clips are full versions of the original clip, but with different In and Out points.

❖ Do any of the following:

• Position the current-time indicator where you want to split the clip or clips, and choose Sequence > Razor At Current-Time Indicator.

• Select the Razor tool ![razor] , and click the point in the sequence where you want to split the clip or clips.

• To split only the audio or video portion of linked clips, Alt-click with the Razor tool.

• Shift-click with the Razor tool to split all tracks at the same point in the Timeline panel. Make sure to first lock any clip that you don't want to split.

💡 *If you want to change effect settings over time, you don't need to split the clip; you can apply keyframes to a single clip instead.*

To lift frames

Lifting removes frames from a sequence and leaves a gap of the same duration as the frames you remove.

❖ Do one of the following:

• To remove entire clips, select one or more clips in the sequence and press the Delete key.

• To remove a range of frames, use controls in the Program Monitor to specify sequence In and Out points, and click the Lift button ![lift icon] .

To extract frames and close gap

Extracting removes frames from the program and closes the resulting gap by ripple deletion.

❖ Do one of the following:

• To remove entire clips, select one or more clips in the sequence, and choose Edit > Ripple Delete.

• To remove a range of frames, use controls in the Program Monitor to specify sequence In and Out points, and click the Extract button ![extract icon] .

To delete all clips on one track

1 Select the Track Select tool ![track select icon] .

2 Do one of the following:

• To delete both the audio and video of linked clips, click the first clip in the track.

• To delete only one track's clips and not the linked counterparts, Alt-click the track's clips.

3 Press Delete.

Note: You can also delete a track along with everything it contains. See "To delete tracks" on page 113.

To delete space between clips

When you delete space between clips, all clips in all unlocked tracks shift according to the duration of the gap. To prevent a track from shifting during a ripple delete (or any insert or extract edit), lock the track.

❖ Right-click the empty space, and choose Ripple Delete.

💡 *You can also right-click a gap and choose Ripple Delete.*

To move a clip in the Timeline panel

You can move a clip by dragging it in the Timeline panel. To move multiple clips, select a range of clips, or move a group of clips.

You can drag the clip and place it in an empty spot or snap it to another clip. You can also lift, extract, insert, and overlay clips that you move. Watch the translucent rectangle that represents the clip's duration as you drag it.

Lift/Overlay is the default mode and is indicated by the Lift/Overlay icon ![lift/overlay icon] when dragging and dropping clips. Pressing Ctrl when you drag a clip extracts it, and pressing Ctrl as you drop a clip performs an insert edit. The Extract/Insert icon ![extract/insert icon] appears when you drag or drop clips while pressing Ctrl.

❖ Do one of the following:

• To lift and overwrite, drag one or more clips to a new destination.

- To lift and insert, drag one or more clips, and press Ctrl as you release the mouse button and drop the clip or clips into a new location.

- To extract and overlay, Ctrl-drag one or more clips, and release Ctrl before you release the mouse button and drop the clip or clips into a new location.

- To extract and insert, Ctrl-drag one or more clips, and press Ctrl as you release the mouse button and drop the clip or clips into a new location.

Note: To affect only one track of a linked clip, press Alt when you first click the clip. You do not need to hold the Alt key after you initiate the edit. The video and audio will become out of sync.

To rearrange clips in the Timeline panel

A useful variation of insert and overlay edits in the Timeline panel is known as the *rearrange edit.* A rearrange edit extracts a clip and inserts it into its new location. However, only clips in the destination track are shifted; clips in other tracks are unaffected. This technique lets you quickly change the order of clips in a sequence, a task that would otherwise require additional steps. When you perform a rearrange edit, the Rearrange icon appears.

❖ Click and drag a clip; then press Ctrl+Alt as you drop it to a new location.

As you press Ctrl+Alt, the Rearrange icon appears. Releasing the clip performs an extract edit, and an insert edit that shifts clips in the destination tracks only.

To move a clip using the keypad

You can change the position of a clip in a sequence by typing the number of frames that you want to move.

1 Select clip in the sequence.

2 Using your numeric keypad with Num Lock on, type + (plus) and the number of frames that you want to move the clip to the right, or type - (minus) and the number of frames you want to move the clip to the left.

Adjacent clips are moved the same amount. If any gaps exist between clips, those gaps are filled first, then nearby clips are moved by the remaining number of frames.

To move a clip to a different track

❖ Drag the clip up or down into the track you want.

Note: When you first drag a clip containing both video and audio (a linked clip) to a sequence, the video and audio tend to occupy corresponding tracks. For example, if you drag a clip on track Video 3, the clip's audio appears in Audio 3. However, if you try to drag the video to Video 3 but Audio 3 uses a different channel type, the audio shifts to the next compatible track, or if no matching track exists, a new one is created.

Previewing a sequence

Previewing at the project's full frame rate

Adobe Premiere Pro renders a sequence when you play back the sequence in the Program Monitor. Sequences that consist of cuts between single tracks of video and audio render quickly, whereas sequences that include layered video and audio and complex effects require more processing time.

When you set the Program Monitor's Quality setting to Automatic, Adobe Premiere Pro dynamically adjusts video quality and frame rate in order to preview the sequence in real time. During particularly complex sections of the sequence, or when using a system with inadequate resources, the playback quality degrades gracefully.

Areas that can't be played at the project's full frame rate are indicated by a red line in the time ruler. To play these areas, you can set the time ruler's work area bar over the red preview indicator and render a preview file. This renders the segment as a new file on the hard drive, which Adobe Premiere Pro can play at the project's full frame rate. In the Timeline panel, rendered areas are marked with a green line.

Note: Projects refer to preview files in much the same way as source media. If you move or delete preview files in the Windows file browser rather than the Project panel, you'll be prompted to find or skip the preview files the next time you open the project.

See also
"To set display quality" on page 100

To set the area to be previewed
❖ Do any of the following:

• Drag the work area bar over the section you want to preview. Make sure that you drag the work area bar from its textured center; otherwise you cue the current-time indicator instead.
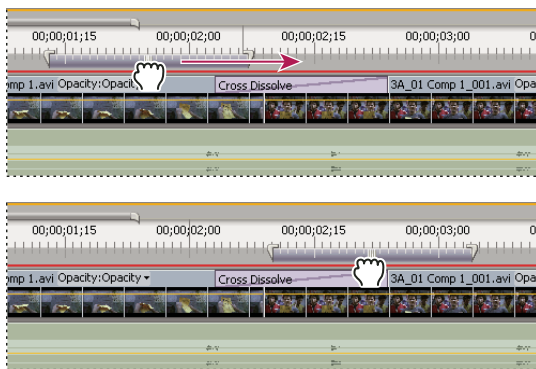
Grabbing the work area bar (above) and dragging it over the section to preview (below)

• Drag the work area markers (at either end of the work area bar) to specify the beginning and end of the work area.
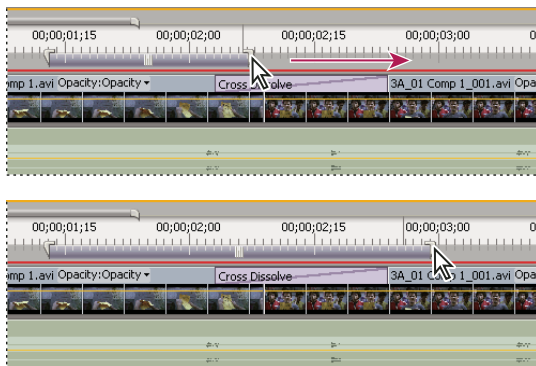
Dragging the work area markers to expand the work area

- Position the current-time indicator, and press Alt+[to set the beginning of the work area.

- Position the current-time indicator, and press Alt+] to set the end of the work area.

- Alt-click the work area bar to resize it to the width of all contiguous clips under the point you click.

- Double-click the work area bar to resize it to either the width of the time ruler, or the length of the entire sequence, whichever is shorter.

Position the pointer over the work area bar to display a tool tip that shows the work area bar's start timecode, end timecode, and duration.

To render a preview

❖ Set the work area bar over the area you want to preview, and choose Sequence > Render Work Area, or press Enter.

The rendering time depends on your system's resources and the complexity of the segment.

To scroll the Timeline panel during preview

You can set an option to automatically scroll the timeline when a sequence is wider than the visible timeline.

1 Choose Edit > Preferences > General.

2 Choose an option from the Timeline panel Scrolling menu:

No Scroll Timeline panel doesn't scroll.

Page Scroll Timeline panel scrolls the visible section of the timeline a page at a time.

Smooth Scroll Current-time indicator stays in the center of the visible timeline.

Previewing on a monitor using a video card

You can display the sequence on any monitor connected to your computer. Previewing on a television monitor requires video hardware that provides an appropriate video port for the monitor. Some video cards and operating system software products support a preview monitor independent of the computer desktop, and others support a preview monitor that is contiguous with the computer desktop so that it can also function as additional space for the application. See the documentation that came with your video card and operating system.

To preview via a DV camera or deck

If you're editing a DV project, you can preview the sequence on a television monitor via your IEEE 1394 connection and DV camcorder or video deck. You can set up this option using the Project Setting dialog box.

Note: Make sure that the monitor is connected to the DV camcorder or deck and the DV camcorder or deck is connected to your computer. In addition, set the camcorder to output to the monitor. Some devices detect this automatically, while others require you choose a menu option.

1 Choose Project > Project Settings > General, and click the Playback Settings button.

2 In the Playback Settings dialog box, set any of the following:

Desktop Video Specifies whether or not to playback to the Program Monitor. Deselect this option to playback only through the external monitor specified in the External Device option. If the External Device option is set to None, Desktop Video is selected to ensure playback to the Program Monitor.

External Device Sets an external device through which to playback video.

Aspect Ratio Conversion Determines how pixel aspect ratio is converted for DV projects.

Desktop Audio Sets audio playback to the computer

External Device Audio Sets audio playback to a connected external audio device.

Export: External Device Enables export to tape for the specified device. This option doesn't affect playback to an external device during export.

24p Conversion Method Specifies the conversion method for 24p footage. See "To set 24P playback options" on page 35.

Desktop Display Mode Sets option for playback through a graphics display card.

• Compatible displays video on the desktop in a non-accelerated manner. This mode is appropriate for use on a graphics card that does not support Direct3D 9.0 acceleration. This option is the lowest performance display mode.

• Standard mode uses hardware capabilities on Direct3D 9.0 capable graphics cards to accelerate playback of video on the desktop.

• Accelerated GPU Mode uses advanced hardware features present in the newest generation of Direct3D 9.0 capable graphics cards to accelerate video playback as well as several effects on the desktop.

Disable Video Output When Premiere Pro is in the Background Disables video to the external monitor if Adobe Premiere Pro is not the active application on your desktop.

There can be a slight delay between the playback on the desktop and the playback on a television via a camcorder/VCR. If the video and audio seem out of sync, try to preview both video and audio through the same device.

Working with preview files

When you render previews, Adobe Premiere Pro creates files on your hard disk. These preview files contain the results of any effects that Adobe Premiere Pro processed during a preview. If you preview the same work area more than once without making any changes, Adobe Premiere Pro instantly plays back the preview files instead of processing the sequence again. Similarly, preview files can save time when you export the final video program by using the processed effects already stored. Adobe Premiere Pro stores the preview files in a folder you can specify.

To further save time, Adobe Premiere Pro maintains existing preview files whenever possible. Preview files move along with their associated segment of a sequence as you edit your project. When a segment of a sequence is changed, Adobe Premiere Pro automatically trims the corresponding preview file, saving the remaining unchanged segment.

To specify the disk location for preview files

1 Choose Edit > Preferences > Scratch Disks.

2 For the Video Previews and Audio Previews menus, choose locations for video and audio preview files.

The disk you choose must be large and fast enough to support video playback, so choose a hard disk attached to your computer, not a network drive. Also, because Adobe Premiere Pro must be able to locate the preview files when you open a project, avoid specifying removable media.

To delete preview files

❖ With the Timeline panel active, choose Sequence > Delete Render Files. When you are prompted, click OK.

Chapter 8: Editing: Beyond the basics

Using markers

About markers

Markers indicate important points in time and help you position and arrange clips. You could use a marker to identify an important action or sound in a sequence. Markers are only for reference and do not alter the video.

You can also use sequence markers to specify chapters for DVD or QuickTime movies, or to specify a URL to send a user to a web page. Adobe Premiere Pro also provides DVD markers that you can add to a sequence to specify scenes, or a menu structure for sequences that you export to DVD. (See "About DVD markers" on page 405.)

You can add markers to a sequence, to a source clip, or to an instance of a clip in a sequence. When you are marking editing points, whether you add markers to a clip or sequence depends on your workflow.

Each sequence and each clip can individually contain up to 100 numbered markers (labeled from 0 to 99) and as many unnumbered markers as you want.

Markers appear in the time ruler of the Source and Program monitors as small icons. Clip markers also become icons within the clip as it appears in the Timeline panel, and sequence markers appear in the sequence's time ruler.
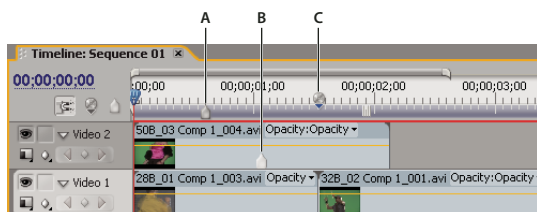
Marker icons in the Timeline panel
A. Sequence marker B. Clip marker C. DVD marker

When setting markers (as with In and Out points), make sure that you're working with the version of the clip you want. Markers added to a source clip (opened from the Project panel) also appear in the clip when you add it to the sequence. Changing a source clip's markers doesn't affect individual instances of the clip already in a sequence, or vice versa.

To add an unnumbered clip marker

1 Do one of the following:

• To add a marker to a source clip, double-click the clip in the Project panel to open it in the Source Monitor.

• To add a marker to a clip in a sequence, double-click the clip to open it in the Source Monitor.

2 In the Source Monitor, go to the time location where you want to set the marker, and click the Set Unnumbered Marker button .

To add an unnumbered sequence marker

1 In the Timeline panel, move the current-time indicator to the location where you want the marker.

2 Click the Set Unnumbered Marker button in the Program Monitor ▽ or the Timeline panel ⬝. (Double-click the Set Unnumbered Marker button to open the Marker dialog box as you set it.)

You can also drag a marker from the Timeline panel's marker button to any point in the time ruler.

💡 *To insert unnumbered markers while a clip or sequence plays, press the asterisk key (*) on the numeric keypad whenever you want to insert a marker.*

See also

"To add sequence marker comments, chapters, and links" on page 142

To add a numbered marker

1 Do one of the following:

• To set a clip marker, open a clip in the Source Monitor or select the clip in the Timeline panel.

• To set a sequence marker, select the Program Monitor or Timeline panel.

2 Move the current-time indicator to where you want to set the marker.

3 Choose Marker > Set Clip Marker or Marker > Set Sequence Marker, and choose an option in the submenu:

Next Available Numbered Sets a numbered marker using the lowest unused number.

Other Numbered Opens a dialog box in which you can specify any unused number from 0 to 99.

To go to a clip marker in the Source Monitor

1 Open a clip in the Source Monitor.

2 Do one of the following:

• To go to the previous marker, click the Go To Previous Marker button ↓← in the Source Monitor.

• To go to the next marker, click the Go To Next Marker button →↓ in the Source Monitor.

To go to a clip or sequence marker in the Timeline panel

❖ Do one of the following:

• To cue the current-time indicator to a clip marker, select the clip in the sequence and choose Marker > Go To Clip Marker, and choose the marker you want from the submenu.

• To cue the current-time indicator to a sequence marker, select the Program Monitor or Timeline panel, choose Marker > Go To Sequence Marker, and choose the marker you want from the submenu.

To move a marker

❖ Do one of the following:

• To move a clip marker in a clip that's in a sequence, open the clip in the Source Monitor and drag the Marker icon ▽ in the Source Monitor's time ruler. You can't manipulate clip markers in the Timeline panel directly.

• To move a sequence marker, drag the marker in the Timeline panel or the Program Monitor's time ruler.

Dragging a marker in the Source or Program Monitor's time ruler moves the corresponding marker icon in the Timeline panel.

Note: Sequence markers in a nested sequence appear as clip markers (with a slightly different color) in the parent sequence and in the Source Monitor. To adjust a nested marker, open the nested sequence in the Timeline panel, and then drag the marker.

To delete a marker

1 Do one of the following:

- To delete a clip marker, select the clip in the sequence, and cue the current-time indicator to the clip marker.

- To delete a sequence marker, make sure that no clips are selected in the sequence, and cue the current-time indicator to the sequence marker.

2 Choose Marker > Clear Clip Marker or Marker > Clear Sequence Marker, and choose an option in the submenu:

Current Marker Deletes the marker at the current time.

All Markers Deletes all markers in either the clip or sequence (depending on the view you're using).

Numbered Deletes a numbered marker from a list of all numbered markers.

Note: You can't remove a sequence marker by dragging it away from the time ruler.

About sequence marker comments, chapters, and links

You use the Marker dialog box to set options for sequence markers. Double-click a marker to open the dialog box.

Marker comments

A sequence marker can contain comments you want to associate with the marker. You enter and view comments in the Marker dialog box. Comments that you import from Adobe Clip Note reviews appear in your sequence as markers. You can navigate through review comments using the Next and Previous buttons in the Marker dialog box. (See "Clip Notes" on page 400.)

DVD chapters

You can specify chapter points in the Marker dialog box for a QuickTime movie or for a sequence to be exported to a DVD authoring program like Adobe Encore DVD. Chapters divide a movie into segments and allow viewers to go to specific points in a movie.

Important: Use DVD markers to specify menus and submenus when exporting a sequence to DVD directly from Adobe Premiere Pro. DVD authoring programs don't read Adobe Premiere Pro DVD markers. (See "Creating DVDs" on page 403.)

Web links

A sequence marker can also contain a web address (URL). When the movie is included in a web page and the marker is reached in the movie, the web page automatically opens. Web links work only with supported formats such as QuickTime.

When using markers for URL links and chapter markers, you can set sequence markers to be longer than one frame in duration. In the Timeline panel, the right side of a sequence marker's icon extends to indicate its duration.

To add sequence marker comments, chapters, and links

1 In the Timeline panel, double-click a sequence marker to open the Marker dialog box.

💡 *You can open the Marker dialog box when you set the marker by double-clicking the Set Unnumbered Marker button ⬜ in the Timeline panel.*

2 Set any of the following options:

Comments Type a message you want associated with the marker.

Duration Drag the duration value or click the value to highlight it, type a new value, and press Enter.

Chapter Enter the chapter name and number.

URL Enter the address of the web page you want to open.

Frame Target Enter the target frame for a web page if using an HTML frameset.

3 To enter comments or specify options for other sequence markers, click Prev or Next.

4 Click OK when you are done editing markers.

Note: DVD authoring programs such as Adobe Encore DVD adhere to DVD guidelines that restrict the proximity of chapter links. When setting markers for use as chapter links, make sure to space them at least 15 frames apart, or by the amount required by your authoring software. Otherwise, your authoring program may move the chapter links automatically.

See also

"About sequence marker comments, chapters, and links" on page 142

Editing audio in the Timeline panel

Setting sample-based audio In and Out points

In and Out points are set at timebase divisions—that is, between video frames. Although frame-based edits are usually adequate for audio as well, some audio edits require greater precision. For example, you may want to place an In point between two words in a sentence, but the tiny division between words doesn't conveniently fall between frames. Fortunately, digital audio isn't divided into frames, but into audio samples, which occur far more frequently. By switching the Source Monitor's or sequence's time ruler to audio samples, you can set more precise audio In and Out points.

When you switch a time ruler to audio units, drag the current-time indicator in the time ruler to navigate smoothly through the clip. (The Frame Forward and Frame Back buttons always use video frames.) In the Source Monitor's time ruler, you can use the viewing area bar to zoom into the time ruler to the sample level and view a very detailed audio waveform. Similarly, you can use the Timeline panel zoom tools to view an audio clip's waveform at the sample level.
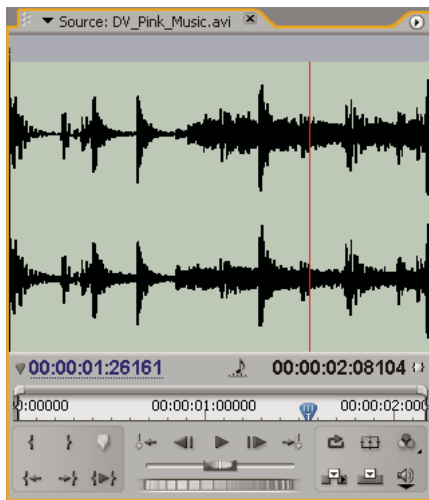
Source Monitor set to display audio units for more precise editing of an audio clip

To use audio samples in the Source or Program Monitor

❖ In the Source or Program Monitor panel menu, choose Audio Units.

To use audio samples in the Timeline panel

1 In the Timeline panel menu, choose Audio Units. The time rulers in the Timeline panel and Program Monitor switch from a frame-based to a sample-based scale.

2 If necessary, expand the audio track containing the clip you want to edit, click the Set Display Style button ![icon], and choose Show Waveform.

3 View the audio In point or Out point of the clip you want to edit in detail by dragging the zoom slider to the right.

4 Trim the clip by doing one of the following:

• To adjust the In point, position the pointer over the left edge of the clip's audio so that the trim head tool appears, and drag left or right.

• To adjust the Out point, position the pointer over the right edge of the clip's audio so that the trim tail icon appears, and drag left or right.

5 Use the waveform display or play the audio to make sure that you adjusted the In and Out points properly.

See also

"To trim a clip in the Timeline panel" on page 122

Linking video and audio clips in the Timeline panel

In the Project panel, clips that contain both video and audio appear as a single item, represented by ![icon]. When you add the clip to the sequence, however, the video and audio appear as two objects, each in its appropriate track (provided you specified both the video and audio sources when adding the clip).

The video and audio portions of the clip are linked so that when you drag the video portion in the Timeline panel, the linked audio moves with it, and vice versa. For this reason, the audio/video pair is called a *linked clip*. In the Timeline panel, each part of the linked clip is labeled with the same clip name, which is underlined. The video is marked [V] and the audio is marked [A].

Ordinarily, all editing functions act on both parts of a linked clip, and both are affected when you select, trim, split, delete, move, nudge, or change the duration or speed of either its video or audio. To affect only the video or audio, you can temporarily override the link by pressing the Alt key when you initiate these editing tasks. After you perform the task, however, the link is restored.

When you want to work with the audio and video individually, you can unlink them. When you do, you can use the video and audio as though they were not linked; even the clip names no longer appear underlined or bear the [V] and [A] labels. Even so, Adobe Premiere Pro keeps track of the link. If you relink the clips, they indicate whether they have been moved out of sync, and by how much. You can have Adobe Premiere Pro automatically resynchronize the clips.

You can also create a link between previously unlinked clips. This is particularly useful if you need to synchronize video and audio that were recorded separately.

Note: You can link video only to audio—you cannot link a video clip to another video clip. You can link a video clip to multiple audio clips, or multiple audio clips together.

See also
"Linking multiple audio clips" on page 182

To link or unlink video and audio
❖ Do any of the following:

• To link video and audio, Shift-click a video and audio clip to select them both, and then choose Clip > Link.

• To unlink video and audio, select a linked clip and choose Clip > Unlink.

Though the audio and video are unlinked, they are both still selected. Reselect either clip to use it separately.

To automatically synchronize clips that were moved out of sync
1 Right-click the number that appears at the In point in the Timeline panel of the out-of-sync video or audio clip. (The number indicates the amount of time the clip is out of sync with its accompanying video or audio clip.)

2 Choose one of the following options:

Move Into Sync Shifts the selected video or audio part of the clip in time to restore sync. Move Into Sync moves the clip without regard to adjacent clips and overwrites any clips to regain sync.

Slip Into Sync Performs a slip edit to restore sync without moving the clip's position in time.

If you want to synchronize multiple clips rather than restore audio and video sync, use the Clip > Synchronize command. (See "To synchronize clips" on page 152.)

To edit tracks of linked clips individually
❖ Alt-click either part of a linked clip, and then use any editing tool. When you are finished editing the clip, you can reselect (click) the clip to edit it as a linked clip again.

Creating split edits

Ordinarily, you set one In point and one Out point for a source clip. Even if it's a linked clip (a clip containing video and audio tracks), In and Out points apply to both tracks of the clip. Sometimes you want to set the video and audio In or Out points independently, however, in order to create *split edits* (also known as L-cuts and J-cuts). Although it's more common to create split edits after clips are assembled into a rough cut, it's possible to set up a split edit in the Source Monitor before adding a clip to the sequence.

To create a split edit

1 If necessary, click the triangle to the left of each track name to expand the audio tracks you want to adjust.

2 Select one of the clips involved in the split edit, and choose Clip > Unlink. Repeat for the other clip.

3 Select the Rolling Edit tool ⬚⬚ from the toolbox.

4 Starting at the audio edit point between the two clips, drag left or right.

Note: If nothing happens, make sure that before you start dragging, you position the pointer over the visible audio edit point, not over an applied audio transition.

To set source In and Out points for a split edit

1 Open a clip in the Source Monitor, and set the current time to the frame you want to set as a video or audio In or Out point.

2 In the Source Monitor, choose Marker > Set Clip Marker, and select Video In, Video Out, Audio In, or Audio Out.

3 Set the remaining video and audio In and Out points. (When you add the clip to a sequence, the video portion starts and ends at different times than the audio.)

Creating special clips

To create a counting leader

If you plan to create film output from a sequence, you may want to add a counting leader. A counting leader helps a projectionist verify that audio and video are working properly and are synchronized. You can create and customize a universal counting leader to add to the beginning of a project. The leader is 11 seconds long.

❖ In the Project panel, click the New Item button ⬚, at the bottom of the Project panel and choose Universal Counting Leader from the menu that appears. Specify the following options as needed:

Wipe Color Specifies a color for the circular one-second wipe area.

Background Color Specifies a color for the area behind the wipe color.

Line Color Specifies a color for the horizontal and vertical lines.

Target Color Specifies a color for the double circles around the numeral.

Numeral Color Specifies a color for the countdown numeral.

Cue Blip On Out Displays a small cue circle in the last frame of the leader.

Cue Blip On 2 Plays a beep at the two-second mark.

Cue Blip At All Second Starts Plays a beep at the beginning of every second during the leader.

💡 *You can customize a counting leader clip by double-clicking it in the Project panel.*

To create color bars and a 1-kHz tone

You can create a one-second clip containing color bars and a 1-kHz tone, as a reference for calibrating video and audio equipment.

❖ In the Project panel, click the New Item button ▣ at the bottom of the Project panel and choose Bars And Tone from the menu that appears.

Note: Some audio workflows must be calibrated at a specific tone level. The default level of the 1-kHz tone is 012 dB referenced to 0 dBfs. You can customize the tone level to match your audio workflow by choosing Clip > Audio Options > Audio Gain with a clip selected. If you select the bars and tone clip in the Project panel, you set the default gain level for new clip instances. If you select a clip in the Timeline panel, you change the level for that clip instance only.

To create black video

Empty areas of a track appear black if no other visible clip areas are present on underlying video tracks. If necessary, you can also create clips of opaque black video for use anywhere in a sequence. A black video clip is a still image at the project frame size, with a five-second duration. To create a clip of a different color, use a color matte (see "To create a solid color matte" on page 368).

❖ In the Project panel, click the New Item button ▣ at the bottom of the Project panel and choose Black Video from the menu that appears.

To create a transparent video clip

You can use transparent video to apply effects to an empty track.

❖ In the Project panel, click the New Item button ▣ at the bottom of the Project panel and choose Transparent Video.

Multiple sequences

To use multiple sequences

A single project can contain multiple sequences. All the sequences in a project share the same timebase, which defines how Adobe Premiere Pro calculates time, and which cannot be changed after you create the project.

• To set the default settings for new sequences, with the Project panel active, choose Project > Project Settings > Default Sequence, and specify the number and type of video and audio tracks.

• To switch sequences, in the Program Monitor or in the Timeline panel, click the tab of the sequence you want to use. The sequence becomes the frontmost tab in both panels.

• To view a sequence in a separate Timeline panel, drag the Sequence tab away from the panel to an empty area.

• To open a sequence in the Source Monitor, press Ctrl and double-click the sequence in the Project panel. In the Timeline panel, press Ctrl and double-click a nested sequence.

To create a new sequence

1 Do one of the following:

• Choose File > New > Sequence.

• In the Project panel, click the New Item button ▣ and choose Sequence.

2 In the New Sequence dialog box, specify the following options:

Sequence Name Enter a descriptive name for the sequence.

Video Type the number of video tracks you want the sequence to contain, or click the up and down arrows to change the number.

Master Choose an option from the pop-up menu to specify whether you want the Master audio track to be mono, stereo, or 5.1.

3 For the remaining fields, enter the number of each type of audio track you want the sequence to contain, or click the up and down arrow buttons to change each number.

4 Click OK to create the sequence.

To learn more about the different types of audio tracks, see "About audio tracks in a sequence" on page 173.

Nesting sequences

You can insert, or nest, sequences into other sequences. A nested sequence appears as a single, linked video/audio clip, even though its source sequence may contain numerous video and audio tracks.

You can select, move, trim, and apply effects to nested sequences as you would to any other clip. Any changes you make to the source sequence are reflected in any nested instances created from it. Moreover, you can nest sequences within sequences—to any depth—to create complex groupings and hierarchies.

The ability to nest sequences enables you to employ a number of time-saving techniques and to create effects that otherwise would be difficult or impossible. Nesting enables you to do the following:

• Reuse sequences. When you want to repeat a sequence—particularly a complex one—you can create it once, and then simply nest it in another sequence as many times as you want.

• Apply different settings to copies of a sequence. For example, if you want a sequence to play back repeatedly but with a different effect each time, just apply a different effect to each instance of the nested sequence.

• Streamline your editing space. Create complex, multilayered sequences separately; then add them to your main sequence as a single clip. This not only saves you from maintaining numerous tracks in the main sequence, but also potentially reduces the chances of inadvertently moving clips during editing (and possibly losing sync).

• Create complex groupings and nested effects. For example, although you can apply only one transition to an edit point, you can nest sequences and apply a new transition to each nested clip—creating transitions within transitions. Or you can create picture-in-picture effects, in which each picture is a nested sequence, containing its own series of clips, transitions, and effects.

When nesting sequences, keep in mind the following:

• You can't nest a sequence within itself.

• Actions involving a nested sequence may require additional processing time, because nested sequences can contain references to many clips, and Adobe Premiere Pro applies the actions to all of its component clips.

• A nested sequence always represents the current state of its source. Changing the content of the source sequence is reflected in the content of nested instances. Duration is not directly affected.

• A nested sequence clip's initial duration is determined by its source. This includes empty space at the beginning of the source sequence, but not empty space at the end.

• You can set a nested sequence's In and Out points as you would other clips. Subsequently changing the source sequence's duration, however, does not affect the duration of existing nested instances. To lengthen the nested instances and reveal material added to the source sequence, use standard trimming methods. Conversely, a shortened source sequence causes the nested instance to contain black video and silent audio (which you may need to trim off the nested sequence).

To nest a sequence in another sequence

❖ Drag a sequence from the Project panel or Source Monitor into the appropriate track or tracks of the active sequence, or use any of the editing methods for adding a clip.

To open the source of a nested sequence

❖ Double-click a nested sequence clip. The source of the nested sequence becomes the active sequence.

To reveal a source frame from a nested sequence

If you want to reveal a clip in a nested sequence (for example, to edit it), you can quickly open the source sequence at the exact frame you want to reveal.

1 In the Timeline panel, drag the current-time indicator to the frame that you want to reveal in its original sequence.

2 Press Shift+T to open the source sequence in the Timeline panel, with the current-time indicator at the frame you specified in the nested sequence.

3 Double-click the clip where the current-time indicator rests to open the clip in the Source Monitor.

Subclips

About subclips

A subclip is a section of a master (source) clip that you want to edit and manage separately in your project. You can use subclips to organize long media files.

You work with subclips in the Timeline panel like you do a master clip. Trimming and editing a subclip is constrained by its start and end points, but you can adjust it to include more or less of the master clip.

Subclips reference the master clip's media file. If you delete or take a master clip offline and keep its media on disk, the subclip and its instance remain online. If you take the original media off disk, the subclip and its instances go offline. If you relink a master clip, its subclips remain linked to the original media.

If you recapture or relink a subclip, it is promoted to a master clip, and all ties to the original media are broken. The recaptured media includes the subclip's referenced portion of the media only. Any instances of the subclip are relinked to the recaptured media.

To use a master clip and its subclips in another project, import the project that contains the clips.

See also

"Source clips, clip instances, and subclips" on page 107

To create a subclip

You can create a subclip from source clips or other subclips that are made up of a single media file. You cannot create subclips from sequences, but you can create subclips from titles and stills.

1 Open a source clip in the Source Monitor. Open the clip from the Project panel; you can't create a subclip from a clip instance.

2 Set In and Out points for the subclip. Either the In or Out point must be different than the source clip's media end points.

💡 *To create a video-only or audio-only subclip, toggle the Take Audio/Take Video button in the Source Monitor.*

3 Do one of the following:

• Choose Clip > Make Subclip, enter a name for the subclip, and click OK.

• Drag the clip to the Project panel, enter a name for the subclip, and click OK.

The subclip appears in the Project panel with a Subclip icon ◰, ◱, ▦, ▨. The icon varies depending on the media type.

💡 *You can also create a subclip by selecting it in the Project panel or Source Monitor, choosing Clip > Edit Subclip, and setting media start and end times for the subclip.*

To adjust media start and end times of a subclip

1 Select the subclip in the Project panel.

2 Choose Clip > Edit Subclip.

3 Edit the Subclip Start and End timecode fields.

Note: If you have an instance of a subclip, you can shorten the subclip to only the In and Out points of that instance. This limit prevents losing frames that are used in the sequence.

To convert a subclip to a master clip

1 Select the subclip in the Project panel.

2 Choose Clip > Edit Subclip.

The converted clip will have the master clip start and end times that are listed in the Edit Subclip dialog box.

3 Select Convert To Master Clip, and then click OK.

Editing a multi-camera sequence

About multi-camera editing

You can use the Multi-Camera Monitor to edit footage from multiple cameras, simulating live camera switching. You can edit footage from up to four cameras using this technique.

To easily synchronize footage from all cameras, make sure each camera records a sync point using a clapper slate or other technique. Keep each camera recording to maintain synchronization. After you capture the footage in Adobe Premiere Pro, use the following workflow to edit the footage:

1. Add clips from multiple cameras to a sequence.

Stack the clips from each camera on separate tracks of a sequence. (See "To add clips for multi-camera editing" on page 152.)

2. Synchronize the clips in the sequence.

Mark the sync point with numbered clip markers, or reassign the sync point for each camera to a specific timecode. (See "To synchronize clips" on page 152.)

3. Create the multi-camera target sequence.

The final edits are made in a target sequence. You create the target sequence by nesting the sequence of synchronized clips into a new sequence. Then you enable the clip in the target sequence for multi-camera editing. (See "To create a multi-camera target sequence" on page 153.)

4. Record the multi-camera edits.

In the Multi-Camera Monitor, you can view the footage of all four cameras simultaneously and switch between cameras to choose footage for the final sequence. (See "To record multi-camera edits" on page 153.)

5. Adjust and refine edits.

You can rerecord the final sequence and substitute clips with footage from one of the other cameras. You can also edit the sequence like any other sequence—using the standard editing tools and techniques, adding effects, or compositing using multiple tracks. (See "To record multi-camera edits" on page 153and "To adjust multi-camera edits in the Timeline panel" on page 154.)

For a tutorial on multi-camera editing, go to Resource Center on the Adobe website. Adobe periodically provides updates to software and Help. To check for updates, click the Open Preferences Dialog button ⚏ in Adobe Help Center, and then click Check For Updates. Follow the on-screen instructions.

Using the Multi-Camera Monitor

The Multi-Camera Monitor plays the footage from each camera and a preview of the final edited sequence. When you record the final sequence, you click a camera preview to make it active and record footage from that camera. The active camera is indicated by a yellow border when in playback mode and a red border when recording.

Note: If the Multi-Camera Monitor displays the same frame in large previews on both the left and right side, the current clip is either not a multi-camera clip or a multi-camera clip that is not enabled.

To display the Multi-Camera Monitor, select the multi-camera target sequence in the Timeline panel, and then choose Multi-Camera Monitor from the Source or Program Monitor panel menu.
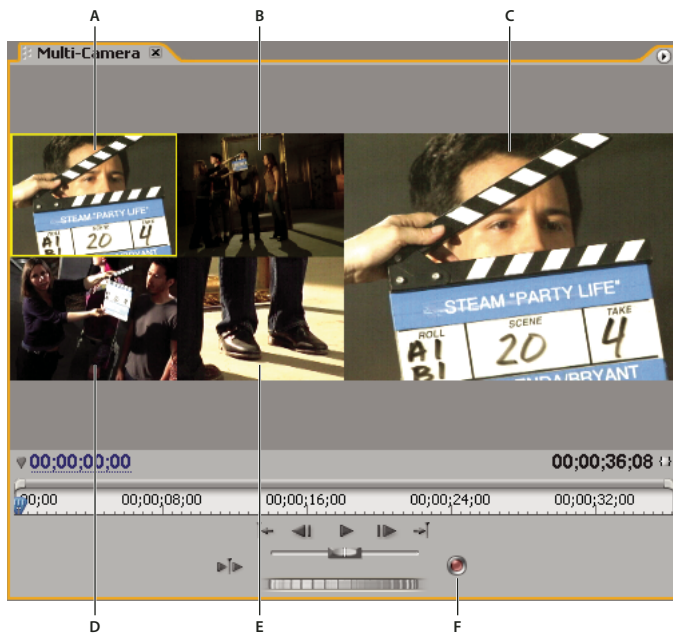
Multi-camera Monitor
A. Camera 1 B. Camera 2 C. Recorded sequence preview D. Camera 3 E. Camera 4 F. Record button

The Multi-Camera Monitor includes the standard playback and transport controls and keyboard shortcuts. The Play Around button ▶│▶ plays the sequence in the preview display, including any preroll and postroll frames specified in General Preferences.

To hide the recorded sequence preview and display only the camera previews, deselect Show Preview Monitor from the Multi-Camera Monitor panel menu.

To resize the Multi-Camera Monitor, drag an edge or corner.

To add clips for multi-camera editing

You can use any type of media in a multi-camera editing session, including footage from various cameras and from still images. You assemble the media into a sequence of up to four video and four audio tracks. You can add more than one clip to a track to accommodate the use of multiple tapes in a camera.

After the clips are assembled, you synchronize them and then create and enable the target sequence.

1 Choose File > New > Sequence.

2 Place clips from each camera on a separate track. Use video and audio tracks 1–4. You can edit the clips as necessary.

Note: Video and audio clips placed above track 4 will not be available for multi-camera editing.

To synchronize clips

Make sure that you've marked the sync points for each camera's footage before you attempt to synchronize them. You can mark the sync points by setting similarly numbered markers for each clip or by reassigning each clip's timecode. (See "To add a numbered marker" on page 141 and "To set timecode manually for a clip" on page 85.)

Note: Adobe Premiere Pro uses an overlay edit when synchronizing clips. Take care not to overwrite adjacent clips if you have multiple clips on the same track.

1 Select the clips you want to synchronize.

2 Target a track (by clicking its track header) to align the other clips to it.

For example, if you synchronize clips on their Out point, the end of each clip aligns with the Out point of the targeted track. A clip will be trimmed if synchronization causes its In point to fall before the sequence zero point.

Note: If one track of a linked audio/video pair is unselected, the pair will become out of sync. Out-of-sync indicators will appear on the clips.

3 Choose Clip > Synchronize, and then choose one of the following options:

Clip Start Synchronizes clips at their In points.

Clip End Synchronizes clips at their Out points.

Timecode Synchronizes clips to the specified timecode. If you use the hours value in source timecode as a camera designator, select the Ignore Hours option to use only minutes, seconds, and frames to synchronize clips.

Numbered Clip Marker Synchronizes clips to the specified numbered clip marker. Choose the marker number to use from the Marker pop-up menu.

You can also use the Synchronize command to sync several video clips on separate tracks or unlinked audio and video tracks when you are not editing a multi-camera sequence.

To create a multi-camera target sequence

1 Choose File > New > Sequence.

2 Drag the sequence containing the multi-camera clips into a video track of the new sequence. (See "To nest a sequence in another sequence" on page 149.)

3 Select the video and audio tracks in the nested sequence, and then choose Clip > Multi-Camera > Enable. The command is unavailable unless you have the video track selected.

To record multi-camera edits

You record a multi-camera edit in the multi-camera target sequence you have already assembled. (See "To add clips for multi-camera editing" on page 152.)

1 Select the multi-camera target sequence in the Timeline panel, and then choose Multi-Camera Monitor from the Program Monitor panel menu.

2 In the Multi-Camera Monitor, click the Record On/Off Toggle button .

Note: You can also switch into record mode during playback by clicking a camera preview in the Multi-Camera Monitor.

3 To use the audio from track 1 regardless of which camera is active, make sure that Audio Follows Video is deselected in the Multi-Camera Monitor panel menu. To change the audio track as you change the camera, select Audio Follows Video.

4 Click the playback button in the Multi-Camera Monitor to start playing the video from all cameras.

The footage from the active camera is recorded in the multi-camera target sequence. A red border indicates the active camera, and the large preview shows the content you are recording.

5 To switch to another camera and record its content, click its small preview in the Multi-Camera Monitor.

You can switch cameras using a keyboard shortcut. The 1, 2, 3, and 4 keys correspond to each camera.

6 When you are done recording, click the Stop button or the Record button to get out of recording mode. You can then use the playback controls to preview your sequence without recording over it.

The target sequence is updated to show the edit points where each camera switch occurs. Camera 1 is the default track in the target sequence. No recording occurs, so no edit points are created until you switch cameras. Each clip in the target sequence is labeled with the camera number (MC1, MC2).

See also

"About multi-camera editing" on page 150

To play clips in the Multi-Camera Monitor

1 Select the multi-camera target sequence in the Timeline panel, and then choose Multi-Camera Monitor from the Program Monitor panel menu.

2 Do one of the following:

• Use the playback controls in the Multi-Camera Monitor.

• Use the playback keyboard shortcuts (spacebar, J, K, L).

A yellow border around a camera preview indicates the active camera. If you click a camera preview, the border turns red and you'll begin recording that camera footage to the sequence.

Note: The Multi-Camera Monitor previews the targeted video only. Effects applied to the video don't display in the Multi-Camera Monitor. To preview a multi-camera sequence with effects applied, as well as any additional video and audio tracks, preview it in the Program Monitor.

To rerecord multi-camera edits

1 Position the current-time indicator before the edit you want to adjust.

2 Start the playback in the Multi-Camera Monitor. When the playback reaches the spot you want to change, switch the active camera by clicking the camera's preview in the Multi-Camera Monitor.

Note: No recording occurs until you switch the active camera. The active camera's preview border switches from yellow to red.

3 When you are done editing, click the Stop Playback button in the Multi-Camera Monitor.

To adjust multi-camera edits in the Timeline panel

❖ Do any of the following in the multi-camera target sequence:

• To replace a clip with footage from another camera, select a clip in the Timeline panel and choose Clip > Multi-Camera > Camera [1,2,3,4].

• Use any of the standard editing tools to make changes in the Timeline panel.

To insert or overlay clips in a multi-camera sequence

You can make edits to a multi-camera sequence from the original four camera clips. For example, if one camera recorded a presenter and another recorded a screen of presentation slides, you can intersperse shots of the presentation slides. You can use this technique as an alternative to rerecording sections of the multi-camera sequence.

1 Double-click the multi-camera target sequence in the Timeline panel to open it in the Source Monitor.

Like the Multi-Camera Monitor, the Source Monitor displays footage previews of the original camera shots.

2 Click the display for the footage you want to add to the sequence. The active display has a yellow border.

3 Choose the clip source that you want to edit (video, audio, or both) and drag the clip to the Timeline panel, or use the Insert or Overlay buttons in the Source Monitor.

Working in other applications

To edit a clip in its original application

The Edit Original command opens clips in their original application so that you can edit them and then automatically incorporate those changes into the current project without quitting Adobe Premiere Pro or replacing files. Exported Adobe Premiere Pro movies can also be embedded with information that allows them to be opened using the Edit Original command that is in other applications, such as Adobe After Effects.

1 Select a clip in either the Project panel or Timeline panel.

2 Choose Edit > Edit Original.

To export a movie with the information to use the Edit Original command, in the Export Movie Settings dialog box, choose Project from the Embedding Options menu. (See "Exporting video as a file" on page 378.)

To edit an image file in Photoshop

In an Adobe Premiere Pro project, you can open an image file in any format that Adobe Photoshop supports.

1 Select a clip in either the Project panel or Timeline panel.

2 Choose Edit > Edit In Adobe Photoshop.

The image opens in Photoshop. When you save the file, changes are available in the project.

To create a new Photoshop file in your project

❖ Choose File > New > Photoshop File.

Photoshop opens with a new blank image. The pixel dimensions match your project's video frame size, and image guides are displayed showing the title safe and action-safe areas set for your project.

To copy and paste between Adobe After Effects and Adobe Premiere Pro

Copying between After Effects and Adobe Premiere Pro (Windows only)

You can copy and paste layers and assets between Adobe After Effects and Adobe Premiere Pro:

• From After Effects, you can copy footage or solid layers and paste them into an Adobe Premiere Pro sequence.

• From Adobe Premiere Pro, you can copy assets (any item in a track) and paste them into an After Effects composition.

• From either After Effects or Adobe Premiere Pro, you can copy and paste footage to the other's Project panel.

Note: You can also paste assets from Adobe Premiere to an After Effects composition. You can't, however, paste footage from After Effects into an Adobe Premiere sequence.

If you want to work with all clips or a single sequence from an Adobe Premiere Pro project, use the Import command to import the project into After Effects.

Use Adobe Dynamic Link to create dynamic links, without rendering, between new or existing compositions in After Effects and Adobe Premiere Pro.

See also

"About Adobe Dynamic Link (Adobe Production Studio only)" on page 158

Copying from After Effects to Adobe Premiere Pro (Windows only)

You can copy a layer containing footage from an After Effects composition and paste it into an Adobe Premiere Pro sequence. Adobe Premiere Pro converts footage layers to clips in the sequence and copies the source footage to the Adobe Premiere Pro Project panel. If the layer contains an effect that is also used by Adobe Premiere Pro, Adobe Premiere Pro converts the effect and all of its settings and keyframes.

You can also copy nested compositions, Photoshop layers, solid layers, and audio layers from After Effects to Adobe Premiere Pro. Adobe Premiere Pro converts nested compositions to nested sequences, and converts solid layers to color mattes. You cannot copy text, camera, light, or adjustment layers to Adobe Premiere Pro.

When you paste a layer into an Adobe Premiere Pro sequence, keyframes, effects, and other properties contained in a copied layer are converted as follows:

After Effects item	Converted to in Adobe Premiere Pro	Notes
Transform property values and keyframes	Motion or Opacity values and keyframes	The keyframe type—Bezier, Auto Bezier, Continuous Bezier, or Hold—is retained.
Effect properties and keyframes	Effect properties and keyframes, as long as the effect also exists in Adobe Premiere Pro	Adobe Premiere Pro lists unsupported effects in the Effect Controls panel as offline.
Audio volume property	Channel Volume filter	
Stereo Mixer effect	Channel Volume filter	
Masks and mattes	Not converted	

After Effects item	Converted to in Adobe Premiere Pro	Notes
Time Stretch property	Speed property	Speed and time stretch have an inverse relationship. For example, 200% stretch in After Effects converts to 50% speed in Adobe Premiere Pro.
Layer-time markers	Not converted	
Blending modes	Not converted	

To copy from After Effects to Adobe Premiere Pro (Windows only)

1 Start Adobe Premiere Pro (you must do this before you copy the layer in After Effects).

2 Select a layer from the After Effects Timeline panel.

3 Choose Edit > Copy.

4 In Adobe Premiere Pro, open a sequence in the Timeline panel.

5 Move the current-time indicator to the desired location, and choose either Edit > Paste or Edit > Paste Insert.

Note: You can copy multiple layers into Adobe Premiere Pro. Each layer is placed on a separate track. The order in which Adobe Premiere Pro places the layers depends on the order in which you selected them in After Effects; the last-selected layer appears on Track 1 of the Adobe Premiere Pro sequence. For example, if you select layers from top to bottom, the layers appear in the reverse order in Adobe Premiere Pro, with the bottommost layer on Track 1.

Copying from Adobe Premiere Pro to After Effects (Windows only)

You can copy a video or audio asset from an Adobe Premiere Pro sequence and paste it into an After Effects composition. After Effects converts assets to composition layers and copies the source footage into the After Effects Project panel. If the asset contains an effect that is also used by After Effects, After Effects converts the effect and all of its settings and keyframes.

You can copy color mattes, stills, nested sequences, and offline files into After Effects. After Effects converts color mattes into solid layers and nested sequences into nested compositions. When you copy a Photoshop still into After Effects, After Effects retains the Photoshop layer information. After Effects converts titles to solid layers.

When you paste an asset into an After Effects composition, keyframes, effects, and other properties contained in a copied asset are converted as follows:

Adobe Premiere Pro asset	Converted to in After Effects	Notes
Motion or Opacity values and keyframes	Transform property values and keyframes	Keyframe type—Bezier, Auto Bezier, Continuous Bezier, or Hold—is retained.
Video filter properties and keyframes	Effect properties and keyframes, as long as the effect also exists in After Effects	After Effects doesn't display unsupported effects in the Effect Controls panel.
Crop filter	Mask layer	
Video and audio transitions	Opacity keyframes (Cross dissolve only) or solids	

Adobe Premiere Pro asset	Converted to in After Effects	Notes
Volume and Channel Volume audio filters	Stereo mixer effect	Other audio filters are not converted.
Speed property	Time Stretch property	Speed and time stretch have an inverse relationship. For example, 50% speed in Adobe Premiere Pro is converted to 200% stretch in After Effects.
Frame Hold	Time Remap	
Clip marker	Layer-time marker	
Sequence marker	Markers on a new solid layer	To copy sequence markers, you must either copy the sequence itself or import the entire Adobe Premiere Pro project as a composition.
Audio track	Audio layers	Audio tracks that are either 5.1 surround or greater than 16-bit aren't supported. Mono and stereo audio tracks are imported as one or two layers.

To copy from Adobe Premiere Pro to After Effects (Windows only)

1 Select an asset from the Adobe Premiere Pro Timeline panel.

2 Choose Edit > Copy.

3 In After Effects, open a composition in the Timeline panel.

4 With the Timeline panel active, choose Edit > Paste. The asset appears as the first layer in the Timeline.

Note: To paste the asset at the current-time indicator, position the current-time indicator and press Ctrl+Alt+V.

Adobe Dynamic Link

About Adobe Dynamic Link (Adobe Production Studio only)

Until now, sharing media assets among post-production applications has required you to render your work in one application before importing it into another—an inefficient and time-consuming workflow. If you wanted to make changes in the original application, you had to re-render the asset. Multiple rendered versions of an asset consume disk space and can lead to file-management challenges.

Adobe Dynamic Link, a feature of Adobe Production Studio, offers an alternative to this workflow: the ability to create dynamic links, without rendering, between new or existing compositions in After Effects and either Adobe Premiere Pro or Adobe Encore DVD. Creating a dynamic link is as simple as importing any other type of asset, and dynamically linked compositions appear with unique icons and label colors to help you identify them. Dynamic links are saved as part of the Adobe Premiere Pro or Adobe Encore DVD project.

Changes you make to a dynamically linked composition in After Effects appear immediately in the linked files in Adobe Premiere Pro or Adobe Encore DVD; you don't have to render the composition or even save changes first.

When you link to an After Effects composition, it appears in the target product's Project panel. You can use the linked composition as you would any other asset. When you insert a linked composition into the target product's timeline, a linked clip, which is simply a reference to the linked composition in the Project panel, appears in the Timeline panel. After Effects renders the linked composition on a frame-by-frame basis during playback in the target product.

• In Adobe Premiere Pro, you can preview the linked composition in the Source Monitor, set In and Out points, add it to a sequence, and use any of the Adobe Premiere Pro tools to edit it. When you add a linked composition that contains both footage and audio layers to a sequence, Adobe Premiere Pro inserts linked video and audio clips in the timeline. (You can unlink these to edit them separately; search for "To unlink video and audio" in Adobe Premiere Pro Help.)

• In Adobe Encore DVD, you can use the linked composition to create a motion menu or insert it into a timeline, and use any of the Adobe Encore DVD tools to edit it. When you add a linked composition that contains both video and audio layers to an Adobe Encore DVD timeline, Adobe Encore DVD inserts separate video and audio clips in the timeline.

Other ways to share content among Production Studio applications include copying and pasting between After Effects and Adobe Premiere Pro, exporting After Effects projects to Adobe Premiere Pro, using the Capture In Adobe Premiere Pro command in After Effects, creating After Effects compositions from Adobe Encore DVD menus, or importing Adobe Premiere Pro projects into After Effects. For more information, see the relevant product's Help.

For a tutorial on Adobe Dynamic Link, go to Resource Center on the Adobe website.

Adobe periodically provides updates to software and Help. To check for updates, click the Preferences button ▤ in Adobe Help Center, and then click Check For Updates. Follow the on-screen instructions.

Saving and Adobe Dynamic Link (Adobe Production Studio only)

You must save your After Effects project at least once before you can create a dynamic link from Adobe Premiere Pro or Adobe Encore DVD to a composition within it. However, you don't have to subsequently save changes to an After Effects project to see changes to a linked composition in Adobe Premiere Pro or Adobe Encore DVD.

If you use the Save As command to copy an After Effects project that contains compositions referenced by Adobe Dynamic Link, Adobe Premiere Pro or Adobe Encore DVD uses the original composition—not the new copy—as its source for the linked composition. You can relink a composition to the new copy at any time (see "To relink a dynamically linked composition (Adobe Production Studio only)" on page 162).

Managing performance and Adobe Dynamic Link (Adobe Production Studio only)

Because a linked composition may reference a complex source composition, actions you perform on a linked composition may require additional processing time as After Effects applies the actions and makes the final data available to Adobe Premiere Pro or Adobe Encore DVD. In some cases, the additional processing time may delay preview or playback.

If you're working with complex source compositions and experiencing playback delays, you can take the composition offline or disable a linked clip to temporarily stop referencing a dynamically linked composition (see "To take a dynamically linked composition offline (Adobe Production Studio only)" on page 162), or render the composition and replace the dynamically linked composition with the rendered file. If you commonly work with complex source compositions, try adding RAM or using a faster processor.

Color and Adobe Dynamic Link (Adobe Production Studio only)

Adobe After Effects works in the RGB (red, green, blue) color space. Adobe Premiere Pro, however, works in the YUV color space. When you work with a dynamically linked composition, Adobe Premiere Pro either converts it to YUV or retains the RGB color space, depending on the output format.

Dynamically linked compositions are rendered in the color depth of the After Effects project (8-, 16-, or 32-bpc, depending on Project Settings). Set the After Effects project color depth to 32-bpc if you're working with HDR (high dynamic range) assets.

In Adobe Premiere Pro, choose Project > Project Settings > Video Rendering, and select Maximum Bit Depth to have Adobe Premiere Pro process at the highest possible quality. This option may slow processing.

To link to a new composition with Adobe Dynamic Link (Adobe Production Studio only)

When you link to a new composition from Adobe Premiere Pro or Adobe Encore DVD, After Effects starts and creates a new project and composition with the dimensions, pixel aspect ratio, frame rate, and audio sample rate of your Adobe Premiere Pro or Adobe Encore DVD project. (If After Effects is already running, it creates a new composition in the current project.) The new composition name is based on the Adobe Premiere Pro or Adobe Encore DVD project name, followed by "Linked Comp *[x]*."

1 In Adobe Premiere Pro or Adobe Encore DVD, choose File > Adobe Dynamic Link > New After Effects Composition.

2 If the After Effects Save As dialog box appears, enter a name and location for the After Effects project, and click Save.

When you link to a new After Effects composition, the composition duration is set to 30 seconds. To change the duration, select the composition in After Effects and choose Composition > Composition Settings. Click the Basic tab, and specify a new value for Duration.

To link to an existing composition with Adobe Dynamic Link (Adobe Production Studio only)

For best results, composition settings (such as dimensions, pixel aspect ratio, frame rate, and audio sample rate) should match those used in the Adobe Premiere Pro or Adobe Encore DVD project.

❖ Do one of the following:

• In Adobe Premiere Pro or Adobe Encore DVD, choose File > Adobe Dynamic Link > Import After Effects Composition. Choose an After Effects project file (.aep), and then choose one or more compositions.

• Drag one or more compositions from the After Effects Project panel to the Adobe Premiere Pro or the Adobe Encore DVD Project panel.

• In Adobe Premiere Pro, choose File > Import. Choose an After Effects project file and click Open, and then choose a composition in the Import Composition dialog box and click OK.

• In Adobe Premiere Pro, drag an After Effects project file into the Project panel. If the After Effects project file contains multiple compositions, Adobe Premiere Pro displays the Import Composition dialog box.

Note: You can link to a single After Effects composition multiple times in a single Adobe Premiere Pro project. In an Adobe Encore DVD project, however, you can link to an After Effects composition only once.

Adobe Encore DVD and After Effects: If you are linking to DVD menus or buttons, turn off subpicture highlight layers in After Effects so that you can control their display in Adobe Encore DVD. For more information, search for "subpicture" in Adobe Encore DVD Help or Adobe After Effects Help.
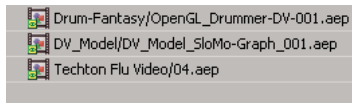
Dynamically linked After Effects compositions

To delete a dynamically linked composition or clip (Adobe Production Studio only)

You can delete a linked composition from an Adobe Encore DVD project if the composition isn't used in the project. You can delete a linked composition from an Adobe Premiere Pro project at any time, even if the composition is used in a project.

You can delete linked clips, which are simply references to the linked composition in the Project panel, from the timeline of an Adobe Premiere Pro sequence or from an Adobe Encore DVD menu or timeline at any time.

❖ In Adobe Premiere Pro or Adobe Encore DVD, select the linked composition or clip and press the Delete key.

To edit a dynamically linked composition in After Effects (Adobe Production Studio only)

Use the Edit Original command in Adobe Premiere Pro or Adobe Encore DVD to edit a linked After Effects composition. Once After Effects is open, you can make edits without having to use the Edit Original command again.

1 Select the After Effects composition in the Adobe Premiere Pro or Adobe Encore DVD Project panel, or choose a linked clip in the Timeline, and choose Edit > Edit Original.

2 Make edits in After Effects, and then switch back to Adobe Premiere Pro or Adobe Encore DVD to view your changes.

Note: If you change the name of the composition in After Effects after you've created a dynamic link to it from Adobe Premiere Pro, Adobe Premiere Pro doesn't update the linked composition name in the Project panel, but retains the dynamic link.

About offline compositions and Adobe Dynamic Link (Adobe Production Studio only)

Adobe Premiere Pro and Adobe Encore DVD display dynamically linked compositions as offline in any of the following circumstances:

• You've renamed, moved, or deleted the After Effects project that contains the composition.

• You've purposefully taken the composition offline.

• You've opened the project that contains the composition on a system on which the Adobe Production Studio isn't installed.

Offline compositions appear with an Offline icon in the Adobe Premiere Pro or Adobe Encore DVD Project panel. If you're working with an offline composition, you can relink it to the original After Effects composition. You can also choose to relink a linked composition to a different source composition.

To take a dynamically linked composition offline (Adobe Production Studio only)

You can take a dynamically linked composition offline if system resources are low, preventing you from smoothly playing back or previewing, or if you want to share your project without having to open it on a system with Production Studio installed. When you take a composition offline, you sever the dynamic link with After Effects, and the linked composition is replaced in the Project panel with an offline composition.

In Adobe Encore DVD, you take a composition offline by *transcoding* it (transcoding is the process by which Adobe Encore DVD converts non-DVD compliant files to the DVD-compliant files that are burned to disc).

❖ Select the composition in the Project panel and do one of the following:

• In Adobe Premiere Pro, choose Project > Make Offline.

• In Adobe Encore DVD, choose File > Transcode Now.

You can temporarily suppress a linked clip in Adobe Premiere Pro by selecting the clip and choosing Clip > Enable. To relink the clip, choose Clip > Enable again (a check mark next to the command indicates that the clip is enabled). For more information about disabling clips, see Adobe Premiere Pro Help.

To relink a dynamically linked composition (Adobe Production Studio only)

❖ Do one of the following:

• In Adobe Premiere Pro, select the composition and choose Project > Link Media. In the Import Composition dialog box, choose an After Effects project, and then choose a composition.

• In Adobe Encore DVD, right-click the composition and choose Locate Asset. In the Open dialog box, locate the composition you want to link to and then click Open.

Chapter 9: Transitions

Transition overview

About transitions

A transition moves a scene from one shot to the next. Generally, you use a simple cut to move from shot to shot, but in some cases you might want to transition between shots by phasing out one and phasing in another. Adobe Premiere Pro provides several transitions that you can apply to your sequence. A transition can be a subtle crossfade or a stylized effect, such as a page turn or spinning pinwheel. While you usually place a transition on a cut line between shots, you can also apply a transition to only the beginning or end of a clip.

Transitions are available in the Video Transitions and the Audio Transitions bins in the Effects panel. Adobe Premiere Pro provides many transitions, including dissolves, wipes, slides, and zooms. These transitions are organized in bins 📁 by type.

💡 *You can create custom bins to group effects any way you'd like. (See "To work with bins" on page 95.)*

For a tutorial on transitions, go to Resource Center on the Adobe website. Adobe periodically provides updates to software and Help. To check for updates, click the Open Preferences Dialog button 🔲 in Adobe Help Center, and then click Check For Updates. Follow the on-screen instructions.

See also

"Working with audio transitions" on page 189

Transition workflow

A typical transition workflow includes the following steps:

1. Add the transition.

You can add a transition by dragging its icon from the Effects panel into the Timeline panel, or by applying the default transition using a menu command or shortcut.

💡 *You can add several clips to a sequence at once, and automatically add a default transition between them. (See "To add clips to a sequence automatically" on page 121.)*

2. Change transition options.

Click the transition in the Timeline panel to display its properties in the Effect Controls panel. You can change its duration, alignment, and other properties.

3. Preview the transition.

Play back the sequence, or drag the current-time indicator through the transition to see the effect. If the playback is not smooth, press Enter to render the sequence.

Clip handles and transitions

In most cases, you don't want a transition to occur during the essential action in a scene. For this reason, transitions work best with *handles*—the extra frames beyond the In and Out points set for the clip.

The handle between a clip's Media Start time and In point is sometimes called *head material*, and the handle between a clip's Out point and Media End time is sometimes called *tail material*.

A clip with handles
A. Media Start B. Handle C. In point D. Out point E. Handle F. Media End

In some cases, the source media may not contain enough frames for clip handles. If you apply a transition, and the handle duration is too short to cover the transition duration, an alert appears to warn you that frames will be repeated to cover the duration. If you decide to proceed, the transition appears in the Timeline panel with diagonal warning bars through it.
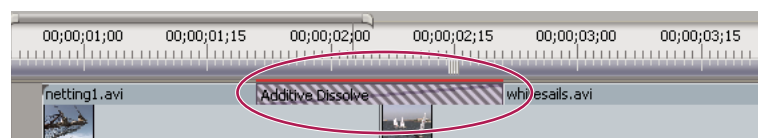
Transition using duplicate frames

💡 *For best results with transitions, shoot and capture source media with sufficient handles beyond the In and Out points of the actual clip duration you want to use.*

Single- and double-sided transitions

Transitions are typically *double-sided*—they combine the last video or audio material from the clip before the cut with the first material from the clip right after the cut. You can, however, apply a transition to an individual clip so that it affects only the beginning or end of the clip. A transition applied to a single clip is called *single-sided*. The clip can be immediately adjacent to another clip or sitting by itself on a track.

Using single-sided transitions, you have more control over how clips transition. For example, you can create the effect of one clip departing using the Cube Spin transition, and the next clip fading in using Dither Dissolve.

Single-sided transitions fade to and from a transparent state, not to and from black. Whatever is below the transition in the Timeline panel appears in the transparent portion of the transition (the portion of the effect that would display frames from the adjacent clip in a two-sided transition). If the clip is on Video 1 or has no clips beneath it, the transparent portions display black. If the clip is on a track above another clip, the lower clip is shown through the transition, making it look like a double-sided transition.
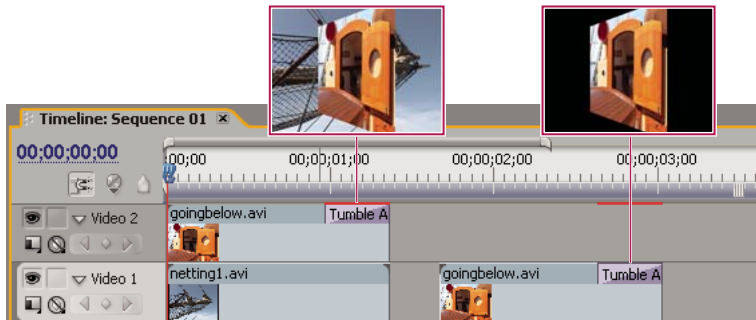
Single-sided transition with clip beneath it (left) compared to single-sided transition with nothing beneath it (right)

If you want to fade to black between clips, use the Dip To Black dissolve. Dip To Black doesn't reveal any underlying clips; it always fades to black.

In the Timeline panel or the Effect Controls panel, a double-sided transition has a dark diagonal line through it, while a single-sided transition is split diagonally with one half dark and one half light.
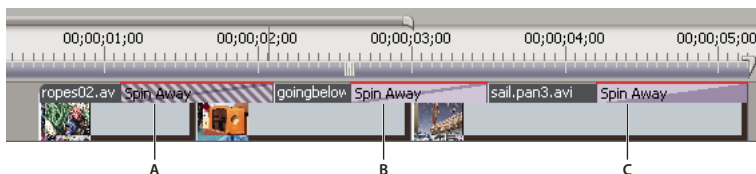
Types of transitions
A. *Double-sided transition using duplicate frames* **B.** *Double-sided transition* **C.** *Single-sided transition*

Note: *If a double-sided transition must repeat frames (rather than use trimmed frames), the transition icon contains additional diagonal lines. The lines span the area where it has used the repeated frames. (See "Clip handles and transitions" on page 164.)*

Adding transitions

Adding a transition

To place a transition between two clips (centered on the cut line), the clips must be on the same track, with no space between them. As you drag the transition to the Timeline panel, you can adjust the alignment interactively. Whether or not the clips have trimmed frames determines how you can align the transition as you place it between the clips. The pointer changes to indicate the alignment options as you move it over the cut:

• If both clips contain trimmed frames at the cut, you can center the transition over the cut or you can align it on either side of the cut so that it either starts or ends at the cut.

• If neither clip contains trimmed frames, the transition automatically centers over the cut and repeats the last frame of the first clip and the first frame of the second clip to fill the transition duration. Diagonal bars appear on transitions that use repeated frames.

• If only the first clip contains trimmed frames, the transition automatically snaps to the In point of the next clip. The transition uses the first clip's trimmed frames for the transition and does not repeat frames from the second clip.

• If only the second clip contains trimmed frames, then the transition snaps to the Out point of the first clip. The transition uses the second clip's trimmed frames for the transition and does not repeat frames from the first clip.

The default duration of a transition, for either audio or video, is set to 1 second. If a transition contains trimmed frames, but not enough to fill the transition duration, Adobe Premiere Pro adjusts the duration to match the frames. You can adjust the duration and alignment of a transition after you place it.

To add a transition

1 In the Effects panel, find the transition you want to apply. You'll need to expand the Video Transitions bin, and then expand the bin containing the transition you want to use.

2 To place a transition between two clips, drag the transition to the cut line between two clips, and release the mouse when one of the following icons appears:

End At Cut icon 🔲 Aligns the end of the transition to the end of the first clip.

Center At Cut icon 🔲 Centers the transition over the cut.

Start At Cut icon 🔲 Aligns the beginning of the transition to the beginning of the second clip.

Note: As you drag in the Timeline panel, you can see the area covered by the transition outlined.

3 To place a transition on a single cut, Ctrl-drag the transition into the Timeline panel. Release the mouse when you see either the End At Cut or Start At Cut icon.

💡 *If you drag a transition to a clip that is not adjacent to another clip, you don't need to Ctrl-drag. The transition automatically becomes single-sided.*

4 If a dialog box appears containing transition settings, specify options and click OK.

To preview the transition, play the sequence or drag the current-time indicator through the transition.

Default transitions

You can specify a video transition and an audio transition as default transitions and quickly apply them between clips in a sequence. Default transition icons are marked by a red outline in the Effects panel. Cross Dissolve and Constant Power Crossfade are preset as the video and audio default transitions.

If you use another transition more frequently, you can set it as the default. When you change the default transition setting, you change the default for all projects. Changing the default transition doesn't affect transitions already applied to sequences.

💡 *If you are preparing to add clips to a sequence and you know you want to apply the default transition to most or all of the clips, consider using the Automate To Sequence command, which can put the default video and audio transition between all the clips it adds. See "To add clips to a sequence automatically" on page 121.*

To add the default transition between clips
1 Click a track header to target the track where you want to add the transition.

2 Position the current-time indicator at the edit point where the two clips meet. You can use the Next Edit and Previous Edit buttons in the Program Monitor.

3 Choose Sequence > Apply Video Transition or Sequence > Apply Audio Transition, depending on the target track.

To specify a default transition

1 Choose Window > Effects and expand the Video Transitions or Audio Transitions bin.

2 Select the transition that you want to make the default.

3 Click the Menu button for the Effects panel.

4 From the Effects panel menu, choose Set Selected As Default Transition.

To set the duration of the default transition

1 Do one of the following:

• Choose Edit > Preferences > General.

• Click the Effects panel menu button. Choose Default Transition Duration.

2 Change the value for the Video Transition Default Duration or Audio Transition Default Duration, and then click OK.

To replace a transition

❖ Drag the new video or audio transition from the Effects panel onto the existing transition in the sequence.

When you replace a transition, the alignment and duration are preserved; however, the settings for the old transition are discarded and replaced by the default settings for the new transition.
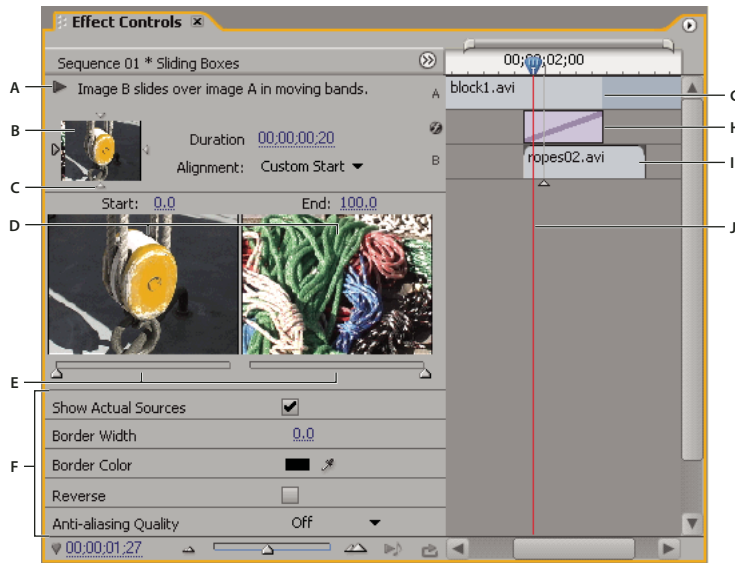
See also

"To change transition settings" on page 171

Fine-tuning transitions

To display transitions in the Effect Controls panel

You can use the Effect Controls panel to change settings for a transition you placed in a sequence. Settings vary from transition to transition.

Effect Controls panel
A. Play The Transition button B. Transition preview C. Edge selector D. Clip previews E. Start and End sliders F. Options G. Clip A (first clip) H. Transition I. Clip B (second clip) J. Current-time indicator

- To open the transition in the Effects control panel, click the transition in the Timeline panel.

- To show or hide the time ruler in the Effect Controls panel, click the Show/Hide Timeline View button .

- To play back the transition in the Effect Controls panel, click the Play The Transition button. This doesn't affect the Program Monitor.

- To view frames from the actual clip or clips in the Effect Controls panel, select Show Actual Sources.

- To see a specific frame of the transition in the small preview, drag the current-time indicator in the Effect Controls panel's time ruler.

Note: Keyframes cannot be used with transitions. For transitions, the Timeline View in the Effect Controls panel is used for adjusting transition alignment and duration.

See also

"To change transition settings" on page 171

Adjusting transition alignment

You can change the alignment of a transition placed between two clips in either the Timeline panel or the Effect Controls panel. A transition need not be centered or strictly aligned to the cut. You can drag the transition to reposition it over the cut as desired.

Note: You can't change a double-sided transition into a single-sided transition. If you realign a double-sided transition to the start or end of a clip, it will use handles from the adjacent clip.

To align a transition in the Timeline panel

1 In the Timeline panel, zoom in so that you can clearly see the transition.

2 Drag the transition over the cut to reposition it.
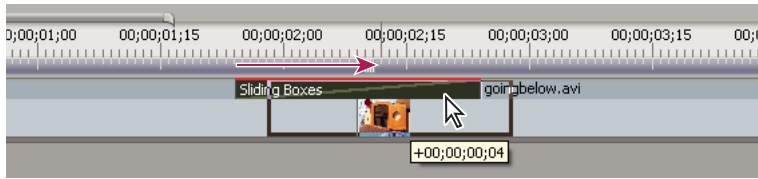
Dragging the transition in the Timeline panel to reposition it

To align a transition using the Effect Controls panel

1 Double-click the transition in the Timeline panel to open the Effect Controls panel.

2 If the Effect Controls time ruler is not visible, click the Show/Hide Timeline View button ⊗ in the Effect Controls panel.

3 In the Effect Controls time ruler, position the pointer over the center of the transition until the Slide Transition icon ⬌ appears; then drag the transition as desired. For finer control, magnify the time ruler.

• To place all of the transition in the clip preceding the edit point, drag the transition to the left to align its end to the edit point.

• To place all of the transition in the clip following the edit point, drag the transition to the right to align its beginning to the edit point.

• To place unequal portions of the transition in each clip, drag the transition slightly left or right. For finer control, zoom in on the time ruler.
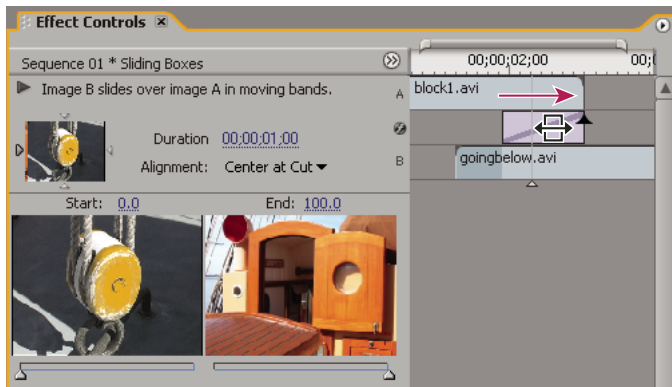
Dragging the transition in the Effect Controls time ruler

💡 *You can also choose an option from the Alignment pop-up menu in the Effect Controls panel. Custom Start appears as an option in the Alignment field only when you drag the transition to a custom location over the cut.*

To move a cut and transition together

You can adjust the location of the cut in the Effect Controls panel. Moving the cut line changes the In and Out points of the clips, but does not effect the length of the movie. As you move the cut, the transition moves with it.

Note: You can't move the cut beyond the end of a clip. If both clips do not have trimmed frames extending beyond the cut, you cannot reposition the cut.

1 Double-click the transition in the Timeline panel to open the Effect Controls panel.

2 If the Effect Controls time ruler is not visible, click the Show/Hide Timeline View button ⊗ in the Effect Controls panel.

3 In the Effect Controls time ruler, position the pointer over the transition, placing it on the thin vertical line that marks the cut. The pointer changes from the Slide Transition icon ⬚ icon to the Ripple Edit icon ⫴.

4 Drag the cut as desired. (You can't move the cut beyond either end of the clip.)

Changing transition duration

You can edit a transition's duration in either the Timeline panel or the Effect Controls panel.

Lengthening a transition's duration requires that one or both clips have enough trimmed frames to accommodate a longer transition. (See "Clip handles and transitions" on page 164.)

To change transition duration in the Timeline panel

❖ In the Timeline panel, position the pointer over the end of the transition until the Trim-In icon ⊢ or the Trim-Out icon ⊣ appears; then drag.

To change transition duration in the Effect Controls panel

1 Double-click the transition in the Timeline panel to open the Effect Controls panel.

2 Do one of the following:

• In the Effect Controls time ruler, position the pointer over the transition until the Trim-In icon ⊢ or the Trim-Out icon ⊣ appears; then drag. (If the Effect Controls time ruler is not visible, click the Show/Hide Timeline View button ⊘ in the Effect Controls panel.)

• Drag the Duration value, or select it and type a new value. How the transition changes length depends on the alignment option currently selected:

Center At Cut or Custom Start The transition's start and end points move equally in opposite directions.

Start At Cut Only the end of the transition moves.

End At Cut Only the beginning of the transition moves.

To set the default duration for transitions

The default duration for transitions is initially set to 1 second for video and 1 second for audio. If you change the default, the new setting has no affect on transitions already placed.

1 Choose Edit > Preferences > General.

2 Change the value for the Video Transition Default Duration or Audio Transition Default Duration; then click OK.

To reposition the center of a transition

Some transitions, such as Iris Round, are positioned around a center. When a transition has a center that can be repositioned, you can drag a small circle in the A preview area in the Effects Control panel.

1 Click the transition in the Timeline panel to open the Effect Controls panel.

2 In the A preview area in the Effect Controls panel, drag the small circle to reposition the transition center. (Not all transitions have an adjustable center point.)

Default center (left) and repositioned center (right)

To change transition settings

1 In the Timeline panel, click a transition to select it.

2 In the Effect Controls panel, adjust settings:

Edge selectors Change the orientation or direction of the transition. Click an Edge selector arrow on the transition's thumbnail. For example, the Barn Doors transition can be oriented vertically or horizontally. A -transition doesn't have Edge selectors if it has one orientation or if orientation isn't applicable.

Start and End sliders Set the percentage of the transition that is complete at the start and end of the transition. Hold down the Shift key to move the start and end sliders together.

Show Actual Sources Displays the starting and ending frames of the clips.

Border Width Adjusts the width of the optional border on the transition. The default Border is None. Some transitions do not have borders.

Border Color Specifies the color of the transition's border. Double-click the color swatch or use the eyedropper to choose the color.

Reverse Plays the transition backward. For example, the Clock Wipe transition plays counterclockwise.

Anti-Aliasing Quality Adjusts the smoothness of the transition's edges.

Custom Changes settings specific to the transition. Most transitions don't have custom settings.

Customizable transitions

To use an image as a transition mask

You can use a black-and-white bitmap image as a transition mask in which image A replaces the black in the mask, and image B replaces the white in the mask. If you use a grayscale image for the mask, pixels containing 50% or more gray convert to black, and pixels containing less than 50% gray convert to white.

Image serves as a mask to create transition.

1 In the Effects panel, expand the Video Transitions bin and then the Special Effect bin.

2 Drag the Image Mask transition from the Special Effect bin to an edit point between clips in the Timeline panel.

3 Click Select Image, and double-click the image file you want to use as a transition mask. The image appears in the Image Mask Settings dialog box. Click OK.

Note: To change the image used for the mask, click Custom in the Effect Controls panel.

To preview the transition, drag the current-time indicator through the transition in the Timeline panel.

To create a Gradient Wipe transition

Adobe Premiere Pro can use a grayscale image as a gradient wipe. In a gradient wipe, image B fills the black area of the grayscale image and then shows through each level of gray as the transition progresses until the white area becomes transparent.

Gradient wipe source image (far left) and resulting transition

1 In the Effects panel, expand the Video Transitions bin and the Wipe bin inside it.

2 Drag the Gradient Wipe transition from the Wipe bin to an edit point between clips in the Timeline panel.

3 Click Select Image, and then double-click the file you want to use as the gradient wipe. The image appears in the Gradient Wipe Settings dialog box.

4 Adjust the softness of the transition's edges by dragging the Softness slider. As you drag the slider to the right, image A increasingly shows through image B. Click OK.

Note: To change the gradient image or the softness, click Custom in the Effect Controls panel.

To preview the transition, drag the current-time indicator through the transition in the Timeline panel.

To use the card flip transition

1 In the Effects panel, expand the Video Transitions bin and the GPU Transitions bin inside it.

2 Drag the Card Flip transition from the GPU Transitions bin to an edit point between clips in the Timeline panel.

3 In the Effect Controls panel, click Custom and set options for the transition:

Rows and Columns Specify the number of rows and columns to split the screen into rectangles for rotation.

Flip Order Specifies how to rotate the rectangles. For example in a checkerboard or spiral pattern.

Axis Of Rotation Specifies whether to rotate the rectangles vertically or horizontally.

Chapter 10: Audio

Working with audio

About audio

In Adobe Premiere Pro, you can edit audio, add effects to it, and mix as many tracks of audio in a sequence as your computer system can handle. Tracks can contain mono, stereo, or 5.1 surround channels.

To work with audio in Premiere Pro, you must first import it into your project or record it directly to a track. You can import audio clips or video clips that contain audio. The clips can contain different numbers of channels—mono (one audio channel), stereo (two audio channels), or 5.1 surround (5 audio channels plus an additional low-frequency effects audio channel).

After the audio clips are in your project, you can add them to a sequence and edit them just like video clips. You can also view the waveforms of audio clips and trim them in the Source Monitor before adding the audio to a sequence. You can adjust volume and pan/balance settings of audio tracks directly in the Timeline or Effect Controls panels, or use the Audio Mixer to make mixing changes in real time. You can also add effects to audio clips in a sequence. If you are preparing a complex mix with many tracks, consider organizing them into submixes and nested sequences.

If you have Adobe Audition 2.0, you can use the Edit in Adobe Audition command to send an audio file to Adobe Audition for advanced editing.

See also

"About recording audio" on page 184

"Adjusting gain and volume" on page 186

"About channels in audio clips" on page 174

"Setting sample-based audio In and Out points" on page 143

"About editing audio in Adobe Audition" on page 201

About audio tracks in a sequence

An Adobe Premiere Pro sequence can contain any combination of the following audio tracks:

Mono (monophonic) Contains one audio channel.

Stereo Contains two audio channels (left and right).

5.1 Contains three front audio channels (left, center, and right), two rear or surround audio channels (left and right), and a low-frequency effects (LFE) audio channel routed to a subwoofer speaker.

You can add or delete tracks at any time. Once a track is created, you can't change the number of channels it uses. A sequence always contains a master track that controls the combined output for all tracks in the sequence. The master track's format is specified in the Default Sequence options of the Project Settings dialog box (choose Project > Project Settings > Default Sequence). The Project Settings dialog box also specifies the default number of audio tracks in a sequence and the number of channels in the default audio tracks.

Sequence audio can contain two kinds of tracks. Regular *audio* tracks contain actual audio. *Submix* tracks output the combined signals of tracks routed to it. Submix tracks are useful for managing mixes and effects.

Although each sequence is created with a default number of audio tracks in the Timeline panel, Adobe Premiere Pro automatically creates new audio tracks as needed. This is useful if the number of audio clips that you're stacking exceeds the number of available tracks in a sequence, or if the number of channels in an audio clip doesn't match the number of channels in the default audio tracks.
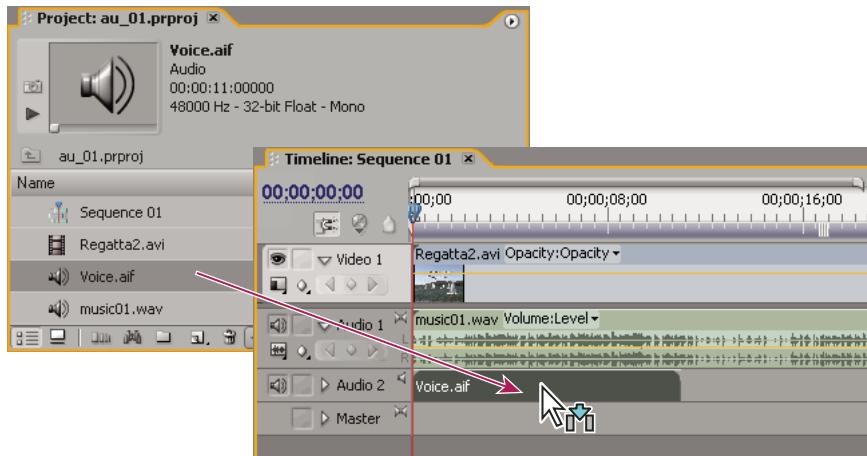
Adobe Premiere Pro creates a new audio track to match the channel format of a clip dragged to the Timeline panel.

See also

"General settings" on page 25

"Working with submixes" on page 192

"To add tracks" on page 113

"To delete tracks" on page 113

"To rename a track" on page 113

About channels in audio clips

Clips can contain one audio channel (mono), two audio channels—left and right (stereo), or 5 audio surround channels with a low-frequency effects audio channel (5.1 surround). Although a sequence can accommodate any combination of clips, all the audio is mixed to the track format (mono, stereo, or 5.1 surround) of the master track.

Adobe Premiere Pro lets you change the track format (the grouping of audio channels) in an audio clip. For example, sometimes you may want to apply audio effects differently to the individual channels in a stereo or 5.1 surround clip. You can change the track format in stereo or 5.1 surround clips so that the audio is placed on separate mono tracks when the clips are added to a sequence.

Note: You can change a master clip's track format only before you add an instance of the clip to a sequence.

Adobe Premiere Pro also lets you remap the output channels or tracks for a clip's audio channels. For example, you can remap the left channel audio in a stereo clip so that it's output to the right channel.

See also

"To show or hide audio waveforms in an audio track" on page 111

"To break out the channels in an audio clip" on page 181

"Mapping audio channels" on page 180

Mixing audio tracks and clips

Mixing is blending and adjusting the sounds that comprise audio in a sequence. A sequence can contain many audio clips on one or more audio tracks. Actions you perform when mixing audio can be applied at various levels within a sequence. For example, you can apply one audio level value to a clip and another value to the track that contains the clip. In addition, a track that is actually a nested sequence may already contain volume changes and effects applied to the tracks in the source sequence. Values applied at all of these levels are combined for the final mix.

You can modify an audio clip by applying an effect to the clip or to the track that contains the clip. Consider applying effects in a planned, systematic way to avoid redundant or conflicting settings on the same clip.

See also

"To record an analog source" on page 76

"Applying audio effects to clips" on page 196

Processing order for audio

As you edit sequences, Adobe Premiere Pro processes audio in the following order, from first to last:

• Gain adjustments applied to clips by using the Clip > Audio Options > Audio Gain command.

• Effects applied to clips.

• Track settings, which are processed in the following order: Pre-fader effects, pre-fader sends, mute, fader, meter, post-fader effects, post-fader sends, and then pan/balance position.

• Track output volume from left to right in the Audio Mixer, from audio tracks to submix tracks, ending at the master track.

Note: The default signal path can be modified by sends or by changing a track's output setting.

See also

"To send a track to a submix" on page 194

Audio workspace

Adobe Premiere Pro has a preconfigured Audio workspace with the panels arranged for convenience in performing audio tasks.

To open the workspace, choose Window > Workspace > Audio.

You can modify the panel arrangement further and choose Window > Workspace > Save Workspace to save the modified configuration as your own audio workspace. Be sure to give your workspace a name in the Save Workspace dialog box before clicking the Save button.

Audio Mixer
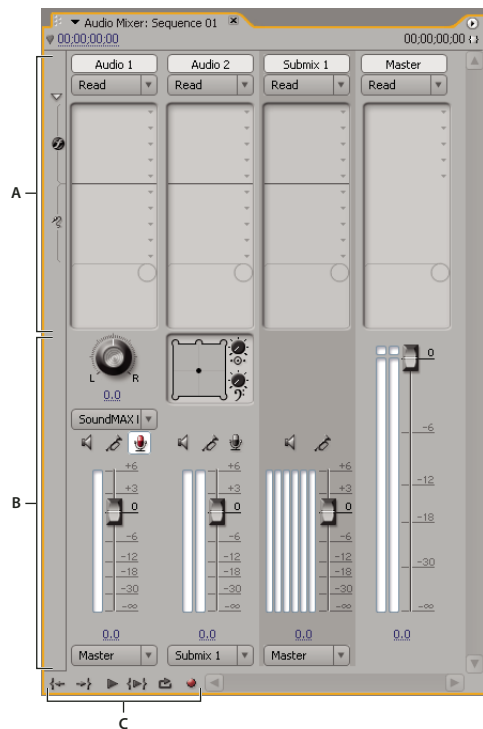
Audio Mixer
A. Tracks area B. Controls area C. Playback controls

In the Audio Mixer, you can adjust settings while listening to audio tracks and viewing video tracks. Each Audio Mixer track corresponds to a track in the timeline of the active sequence and displays the timeline's audio tracks in an audio console layout. Each track is labeled near the top of the Audio Mixer, and you can rename a track by double-clicking its name. You can also use the Audio Mixer to record audio directly into a sequence's tracks.
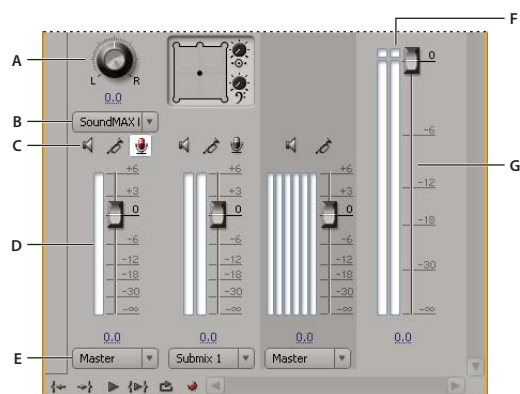
Audio Mixer
A. Pan/balance control B. Track Input Channel C. Mute Track/Solo Track/Enable Track For Recording buttons D. VU meters and faders
E. Track Output Assignment F. Clipping indicator G. Master VU meter and fader

By default, the Audio Mixer displays all audio tracks and the master fader, and the VU meters monitor output signal levels. The Audio Mixer represents the tracks in the active sequence only, not all project-wide tracks. If you want to create a master project mix from multiple sequences, set up a master sequence and nest other sequences within it.

Audio mixer playback controls
A. Go To In Point B. Go To Out Point C. Play/Stop Toggle D. Play In To Out E. Loop F. Record

A separate audio meters panel can be opened and docked anywhere in your workspace for constant audio monitoring even when the full Audio Mixer isn't visible or when the Master Fader section is scrolled out of view. The audio meters panel mirrors the audio display of the Audio Mixer's Master Meters. It does not display audio output from the Capture panel, Source Monitor, or Reference Monitor.

If you apply a VST plug-in effect to a track in the Audio Mixer, you can double-click the effect in the Effects And Sends panel to open a separate VST editing window with the option controls.

Audio Mixer
A. Timecode B. Automation Mode C. Effects D. Sends E. Effect or send option F. Window menu G. In/out program duration H. Track name

See also

"To record an analog source" on page 76

"Working with VST effects" on page 198

To modify the Audio Mixer

❖ Choose any of the following from the Audio Mixer menu:

• To display or hide specific tracks, choose Show/Hide Tracks, use the options to mark the tracks you want to see, and click OK.

• To display hardware input levels on the VU meters (not track levels in Adobe Premiere Pro), choose Meter Input(s) Only. When this option is on, you can still monitor audio in Adobe Premiere Pro for all tracks that aren't being recorded.

• To display time in audio units instead of video frames, choose Audio Units. You can specify whether to view audio units or milliseconds by changing the Display Format option in the Project > Project Settings > General dialog box. The Audio Units option affects the time displays in the Audio Mixer, Program panel, and Timeline panel.

• To display the Effects And Sends panel, click the Show/Hide Effects And Sends triangle along the left side of the Audio Mixer. To add an effect or send, click the Effect Selection or Send Assignment Selection triangle in the Effects And Sends panel, and then choose from the pop-up menu.

Note: If you can't see all of the tracks that are supposed to be displayed, they may be beyond the edges of the Audio Mixer. Resize the Audio Mixer or scroll horizontally.

To monitor specific tracks in the Audio Mixer

❖ Click the Solo Track button for the corresponding tracks.

Only the tracks with the Solo Track button enabled are monitored during playback.

Note: You can also silence a track using the Mute Track button. However, use the Timeline Speaker icon for controlling which tracks to hear during editing, and reserve the Mute Track button for automated control.

To open a separate audio meters panel

❖ Choose Window > Audio Master Meters

Viewing audio data

To help you view and edit the audio settings of any clip or track, Adobe Premiere Pro provides multiple views of the same audio data. You can view and edit volume or effect values for either tracks or clips in the Audio Mixer or in the Timeline panel. Make sure that the track display is set to Show Track Keyframes or Show Track Volume.

Additionally, audio tracks in the Timeline panel contain waveforms, which are visual representations of a clip's audio over time. The height of the waveform shows the amplitude (loudness or quietness) of the audio—the larger the waveform, the louder the audio. Viewing the waveforms in an audio track is helpful for locating specific audio in a clip.

To view a waveform, expand the audio track by clicking the triangle next to the audio track name.

Clicking the triangle expands the audio track to show the audio waveform.

See also

"Audio Mixer" on page 176

"About the Timeline panel" on page 107

To view audio clips

You can view an audio clip's Volume, Mute, or Pan time graphs and its waveform in the Timeline panel. You can also view an audio clip in the Source Monitor, which is useful for setting precise In and Out points. You can also view sequence time in audio units instead of frames, which is useful for editing audio at smaller increments than frames.

❖ Do any of the following:

• To view the audio waveform of a clip in the Timeline panel, click the triangle to the left of the audio track name and click the Set Display Style icon ▦ under the Toggle Track Output icon ◀ᴗ. Then choose Show Waveform.

• To view an audio clip in the Source Monitor when the clip is in the Timeline panel, double-click the clip.

• To view an audio clip in the Source Monitor when the clip is in the Project panel, drag the clip to the Source Monitor. If a clip contains video and audio, you can view its audio in the Source Monitor by clicking the Toggle Take Audio And Video button repeatedly until it displays the Take Audio icon ◀ᴗ.

To view time in audio units

❖ In the Audio Mixer, Program Monitor, Source Monitor, or Timeline panel, choose Audio Units from the panel menu.

💡 *To see more volume detail when viewing an audio waveform in the Timeline panel, increase the track height. To see more time detail, view time in audio units.*

Making quick audio adjustments

Although Adobe Premiere Pro includes a full-featured audio mixer, there are times when you may not need many of the options. For example, you might be creating a rough cut from video and audio captured together from DV footage, output to stereo tracks. In such a case, follow these guidelines:

• Start with the Master meters and volume fader in the Audio Mixer. If the audio is too far below 0 dB or too high (the red clipping indicator appears), adjust the level of clips or tracks as needed.

• To temporarily silence a track, use the Mute Track button in the Audio Mixer or the Toggle Track Output icon 🔊 in the Timeline panel. To temporarily silence other tracks, use the Solo button in the Audio Mixer.

• When making audio adjustments of any kind, determine whether the change should be applied to the entire track or to individual clips. Audio tracks and clips are edited in different ways.

• Use the Show/Hide Tracks command in the Audio Mixer menu to display only the information you want to see and save screen space. If you are not using effects and sends, you can hide them by clicking the triangle at the left edge of the Audio Mixer.

See also

"Adjusting gain and volume" on page 186

"Mixing audio tracks and clips" on page 175

Working with clips, channels, and tracks

To extract audio from clips

You can extract audio from clips containing audio and generate new audio master clips in your project. The original master clips are preserved. Any source channel mappings, gain, speed, duration, and interpret footage adjustments in the original master clips are applied to the new extracted audio clips.

1 Select one or more clips containing audio in the Project panel.

2 Choose Clip > Audio Options > Extract Audio.

Adobe Premiere Pro generates new audio files containing the extracted audio. The word "Extracted" is added to the end of the file names of the new audio clips.

To render and replace audio in a sequence

You can select an audio clip in a sequence and generate a new audio clip that replaces the one you selected. The new audio clip contains any editing and effects you applied to the original sequence clip. If you trimmed the original sequence clip, the new clip contains only the trimmed audio instead of the entire audio of the original master clip.

1 Select an audio clip in a sequence.

2 Choose Clip > Audio Options > Render And Replace.

A new audio clip is created and replaces the selected audio clip. The master clip (either audio clip or video clip containing audio) in the Project panel is untouched.

Mapping audio channels

You can define how a clip's audio is mapped to channels and audio tracks when the clip is added to a sequence or viewed in the Source Monitor. Mapping is applied to clips in the Project panel using the Source Channel Mappings command. You can apply the command to multiple master clips. When the command is applied, the following controls are available in the Source Channel Mappings dialog box:

Track Format Defines the type of track in which the clip's audio channels are grouped—mono, stereo, mono as stereo, or 5.1 surround. When you change a master clip's track format from stereo or 5.1 surround to mono, Adobe Premiere Pro maps each channel to a separate mono track. When you add the clip to the sequence, the clips on the separate mono tracks are linked together. For more information on multi-clip links, see "Linking multiple audio clips" on page 182

Enable Enables or disables an audio source channel. When you add a clip to a sequence, only the enabled channels are added to the Timeline panel. Disabling a source channel also prevents you from swapping its output channel with another source channel.

Source Channel Lists the original channels of the clip's audio.

Track Displays the order that the channels are placed into the Timeline panel.

Note: Under Track, the numbers do not correlate with the actual audio track numbers.

Channel Displays the channel type that the source channel is mapped to.

Playback button and slider Lets you preview the audio of the selected source channel. You can preview a source channel whether it's enabled or not. The playback button and slider is unavailable if you're applying the Source Channel Mappings command to multiple master clips.

You should map source audio channels before adding a clip to a sequence. If you apply the Source Channel Mappings command to a master clip that's been added to a sequence, you can only swap the output tracks and channels between source channels. The Track Format and Enable controls are unavailable. This prevents the master clip's overall configuration from becoming out of sync with instances of the master clip already in a sequence.

To map audio channels in a clip

Adobe Premiere Pro lets you specify how a clip's audio is mapped to channels in audio tracks.

1 Select one or more clips containing audio in the Project panel and choose Clip > Audio Options > Source Channel Mappings.

Note: If you're selecting more than one audio clip, make sure the track format is the same in all the selected clips.

2 In the Source Channel Mappings dialog box, do any of the following:

• To map the audio to a different track format, click the format you want (Mono, Stereo, Mono As Stereo, or 5.1).

• To enable or disable an audio channel, select or deselect the Enable option for a source channel. When a clip is added to a sequence, only the enabled channels are added to the Timeline panel.

• To map a source channel to a different output track or channel, drag a track or channel icon from one source channel row to another source channel row. This swaps the output channels or tracks for the two source channels.

Note: When you view a clip with remapped source channels in the Effect Controls panel, the tracks appear in ascending order, but their associated source channels are determined by the mapping.

• To map less than six source channels to the output channels in 5.1 surround audio, drag the channel icon from one source channel row to another source channel row, or click the 5.1 Channel icon until the source channel is mapped to the desired output channel.

• To preview the audio in a channel, select the source channel and click the Playback button or use the slider.

3 Click OK to apply the source channel mappings to the clip's audio.

Track formats for mapping source audio channels
Mono Maps the source audio channels so that they are placed on separate mono audio tracks when the clip is added to a sequence. You can apply the Mono track format to clips containing any number of audio channels.

Stereo Maps the source audio channels so that paired channels are placed on separate stereo audio tracks when the clip is added to a sequence. You can apply the Stereo track format to clips containing any number of audio channels. However, if the clip doesn't contain an even number of channels, a channel with silence is created and paired with the odd-numbered channel when the clip is added to a sequence.

Mono As Stereo Maps the source audio channels so they are placed on separate stereo audio tracks when a clip is added to a sequence. Adobe Premiere Pro duplicates the audio from mono source channels and places it in the left and right channels of the stereo tracks. You can apply the Mono As Stereo format to clips containing any number of audio channels.

5.1 Maps the source audio channels so that one or more groups of six channels are placed into separate 5.1 surround audio channels when the clip is added to the Timeline panel. If the number of source channels is not in multiples of six, Adobe Premiere Pro creates a 5.1 surround audio track with silence on one or more channels when the clip is added to the Timeline panel.

See also
"Audio output mapping" on page 186

To break out the channels in an audio clip

The Breakout To Mono command creates mono audio clips from a clip's stereo or 5.1 surround audio. Breaking out a stereo clip results in two mono audio clips—one for each channel. Breaking out a 5.1 surround clip results in six mono audio clips—five channels plus the LFE channel. The original master clip is always preserved.

1 In the Project panel, select a clip containing stereo or 5.1 surround audio.

2 Choose Clip > Audio Options > Breakout To Mono.

The resulting files are given file names reflecting the name of the original clip, followed by the channel names. For example, a stereo audio clip named Zoom becomes two files named Zoom Left and Zoom Right.

The Breakout To Mono command does not create clips that are linked. If you want to create mono clips that are linked, use the Source Channel Mappings command.

See also
"Linking multiple audio clips" on page 182

To use a mono clip as stereo

You may sometimes find it useful to use a mono audio clip as a stereo clip. Using the Source Channel Mappings feature, you can apply a mono clip to a pair of left and right stereo channels.

**1** In the Project panel, select a mono clip.

2 Choose Clip > Audio Options > Source Channel Mappings.

3 In the Source Channel Mappings dialog box, select Mono As Stereo.

Important: You can apply the Source Channel Mappings command to a mono clip only in the Project panel, before the clip appears in the Timeline panel. You can't convert a clip instance to stereo when it's used in a mono audio track.

Linking multiple audio clips

In Adobe Premiere Pro, you can link one video clip to multiple audio clips or link multiple audio clips together. Linked clips remain in sync as you move them or trim them in the Timeline panel. You can apply audio effects, including Volume and Panning effects, to all channels in the linked clips. If you make an edit that moves one of the linked clips without moving the others, out-of-sync indicators alert you that the clips are no longer in sync.
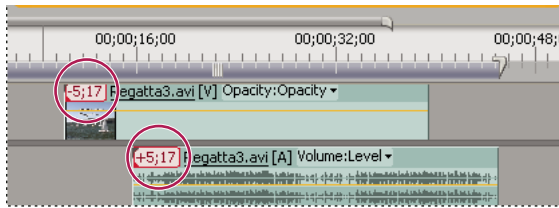
Out-of-sync indicators appear when linked clips are no longer in sync.

Note: A multi-clip link can contain only one video clip.

To create a multi-clip link, the audio clips must have the same channel type and each clip must be on a different track. If clips are already linked, such as an audio clip linked to a video clip, they must be unlinked before creating the multi-clip link.

When you link audio clips in a sequence, you link only the instances of the master clips. The original master audio clips in the Project panel are untouched.

You can display and trim multi-clip link in the Source Monitor. To view a track in the multi-clip link, choose from the Track pop-up menu. You can view and play only one channel at a time in the Source Monitor. if the linked clips contain markers, the Source Monitor timeline displays markers only for the displayed track. If the Source Monitor displays a multi-clip link from the Project panel, you can use the Overlay or Insert buttons to add the linked clips to separate tracks in the Timeline panel.

Choosing a track of a multi-clip link in the Source Monitor

The Effect Controls panel displays all the video and audio tracks in a multi-clip link with the applied effects grouped together by track. You can apply effects from the Effects panel to a specific group in the Effect Controls panel.
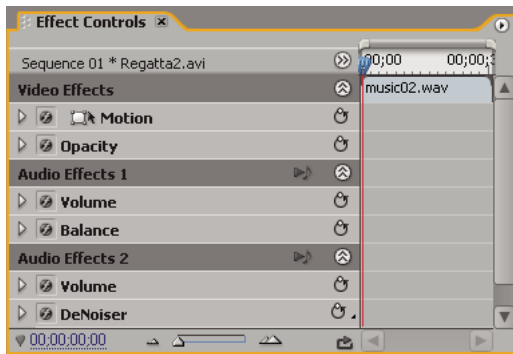
Effects applied to the audio tracks in a multi-clip link displayed in the Effect Controls.

See also

"Linking video and audio clips in the Timeline panel" on page 144

"To edit a multi-clip link in the Source Monitor" on page 183

To link audio clips in the Timeline panel

In the Timeline panel, you can link multiple audio clips to one video clip, or you can link multiple audio clips to each other. Keep in mind that you're linking only instances of the master clips in the Timeline panel. The original master clips in the Project panel are not linked.

1 (Optional) If necessary, select the linked video and audio clips, and then choose Clip > Unlink.

Note: If you're linking a video clip to multiple audio clips, you must first unlink it from its original audio. Otherwise, you can only group the clips.

2 Do one of the following:

• Shift-click to select a video clip and more than one audio clip on separate tracks in the Timeline panel.

• Shift-click to select more than one audio clip on separate tracks in the Timeline panel.

All audio clips must have the same track format (mono, stereo, or 5.1 surround).

3 Choose Clip > Link.

See also

"To group clips" on page 133

To edit a multi-clip link in the Source Monitor

1 Do one of the following:

• In the Project panel, double-click a linked master clip.

• In the Timeline panel, double-click a linked clip.

2 Choose a track from the Track menu to display a specific channel.

3 (Optional) Specify the In and Out points for a track. The results depend on whether the multi-clip link came from the Project or the Timeline panel:

• For a multi-clip link from the Project panel, specifying the In and Out points for one track applies the same In and Out points to all the linked clips. The clips all have the same duration.

- For a multi-clip link from the Timeline panel, specifying the In and Out points for a specific track applies the same amount of trimming to the In and Out points of the other linked tracks. The In and Out points of linked tracks with different durations will be different. The In and Out points of linked clips are the same only if they have identical durations.

4 (Optional) If the Source Monitor displays linked clips from the Project panel, click the Insert or Overlay icon to add the multi-clip link to a sequence. Each linked clip appears on a separate track.

See also

"Linking multiple audio clips" on page 182

Recording audio

About recording audio

Adobe Premiere Pro lets you record directly to the Timeline panel. You can record to an audio track in a new sequence or record to a new audio track in an existing sequence. The recording is saved as an audio clip that's added to your project.

Before recording audio, make sure that your computer has sound inputs. Adobe Premiere Pro supports ASIO (Audio Stream Input Output) devices. There are many ASIO devices that have connectors for connecting speaker, microphone cables, and breakout boxes.

If your computer has an ASIO device for connecting sound input devices, make sure that the sound device settings and input volume level options are properly set in Windows XP. Refer to your operating system's Help for details.

In Adobe Premiere Pro, set the default device options in the Audio Hardware Preferences for specifying the input channel used when recording.

Once your sound input devices are connected and all preliminary settings are made, you can use the Audio Mixer in Adobe Premiere Pro to record audio. Use controls in the Audio Mixer to adjust the monitoring levels. An audio clip is created from the recording and is added to both the Timeline and Project panels.

See also

"To record audio" on page 185

"Digitizing analog audio" on page 75

To prepare the input channel for recording

When you enable recording for a track, the track can record from the Default Device channel specified in the Audio Hardware Preferences dialog box. This dialog box includes the ASIO Settings button, which you use to enable audio inputs connected to your computer. Submix and master tracks always receive audio from tracks within the sequence, so recording and track input options are unavailable for them.

❖ Choose Edit > Preferences > Audio Hardware, and set the following options:

Default Device Determines which connected audio device is routed into and out of Adobe Premiere Pro. Select the ASIO drivers for your audio device. If your sound card does not have manufacturer-supplied ASIO drivers, choose Premiere Pro Windows Sound for this setting. For a device to be available, an up-to-date driver must be properly installed in Windows. In addition, if you want to input more than two stereo channels or monitor 5.1 surround audio,

the device driver must comply with the ASIO (Audio Stream Input Output) specification. If it doesn't, only stereo inputs and outputs will be available, regardless of the number of hardware inputs and outputs that are connected.

ASIO Settings   Specifies the ASIO settings for the selected device. The settings in this dialog box are set by the device and driver you are using, not by Adobe Premiere Pro. See the documentation for the ASIO device and driver you are using.

To record audio

If the audio hardware on your computer is set up and the input audio device is specified in Premiere Pro Audio Hardware Preferences, you're ready to record.

1 Make sure that the input device (microphone or other audio device) is connected properly to your computer.

2 (Optional) To mute the audio while you're recording, choose Edit > Preferences > Audio, and then select the Mute Input During Timeline Recording option in the Preferences dialog box. Click OK to close the dialog box.

3 In the Audio Mixer, click the Enable Track For Recording icon 🎤 for the track that you want to record your audio in.

Important: Make sure that the track format is appropriate for the audio that you're recording. For example, if you're recording voice with a single microphone, you may want to record to a mono audio track.

4 Choose the recording input channel from the Track Input Channel pop-up menu.

Note: The Track Input Channel pop-up menu appears after you click the Enable Track For Recording icon.

5 Repeat steps 3 and 4 as necessary if you're recording to multiple tracks.

6 (Optional) Create a new sequence.

Note: It's also possible to record to an existing sequence. This is useful for recording voice-overs. You can record your voice while watching the playback of the sequence. When you record voice-overs to an existing sequence, it's good practice to click the Solo Track icon 🎚 in the Audio Mixer for the track that you're recording to. This mutes the other audio tracks.

7 (Optional) Select the audio track that you want to record to.

8 (Optional) Adjust the levels on the input device to achieve the proper recording level.

9 Click the Record icon 🔴 at the bottom of the Audio Mixer to put it in Record mode.

10 Click the Play button ▶ to start recording.

11 If necessary, adjust the track volume slider up (louder) or down (quieter) as you record to maintain the monitor level you want.

The red indicators at the top of the VU meters light up if the audio is clipped. Make sure the audio level isn't loud enough to cause clipping. Generally, loud audio registers near 0dB, and quiet audio registers around -18dB.

12 Click the Stop icon ⬛ to stop recording.

The recorded audio appears as a clip in the audio track and as a master clip in the Project panel. You can always select the clip in the Project panel and rename or delete it.

To mute input during recording

Select this option if you don't want the audio to be monitored when you record to the Timeline panel. This can prevent feedback or echo when your computer is connected to speakers.

1 Choose Edit > Preferences > Audio.

2 Select the Mute Input During Timeline Recording option.

Audio output mapping

Using the Audio Output Mapping preferences, you can specify how each device channel corresponds to an Adobe Premiere Pro audio output channel. The Stereo and 5.1 columns correspond to the number of channels (outputs) in the current sequence's master audio track, which you specify when you create a sequence. Mono sequences use the Stereo column because the mono signal is output to both the left and right speakers.

The following icons, under the Stereo Column icon [icon], indicate device channel mapping for stereo mixes:

[icon]   The left stereo channel

[icon]   The right stereo channel

In the 5.1 Column, the following icons indicate device channel mapping for 5.1 surround mixes:

[icon]   The left front channel

[icon]   The right front channel

[icon]   The left surround channel

[icon]   The right surround channel

[icon]   The center front channel

[icon]   The low frequency effects channel

To set the audio output mapping

1 Choose Edit > Preferences > Audio Output Mapping.

2 In the Preferences dialog box, choose Premiere Pro Windows Sound from the Map Output For menu.

3 To change the output channels of audio source channels, drag a channel icon from one source channel row to another source channel row. This swaps the output channels of the two source audio channels.

Adjusting volume levels

Adjusting gain and volume

Gain generally refers to the input level or volume in clips. *Volume* generally refers to the output level or the volume in sequence clips or tracks. You can set gain or volume levels to make levels more consistent among tracks or clips, or to adjust a track's or clip's audio signal when it is too high or too low. Keep in mind, however, that if the level of an audio clip was set too low when it was digitized, increasing the gain or volume might simply amplify noise. For best results, follow the standard practice of recording or digitizing source audio at the optimum level; this allows you to concentrate on adjusting track levels.

You use the Audio Gain command to adjust the gain level for a selected clip. The Audio Gain command is independent of the output level settings in the Audio Mixer and the Timeline panel, but its value is combined with the track level for the final mix.

You can adjust the volume for a sequence clip in the Effect Controls or Timeline panels. In the Effect Controls panel, you use the same methods to adjust the volume as you do to set other effect options. In terms of editing, it is often simpler to adjust the Volume effect in the Timeline panel.

You control track levels in the Audio Mixer or the Timeline panel. Although you control track levels primarily through the Audio Mixer, you can also do so using audio track keyframes in the Timeline panel. Because track keyframes represent mixer automation settings, they affect output only when automation is set to Read, Touch, or Latch.

See also

"To activate keyframing" on page 234

"Automating audio changes in the Audio Mixer" on page 199

To specify the gain level for a clip

1 Do one of the following:

• If you want to adjust the gain of a master clip so that all instances of the clip added to the Timeline panel have the same gain level, select the master clip in the Project panel.

• If you want to adjust the gain of just one instance of a master clip already in a sequence, select the clip in the Timeline panel.

2 Choose Clip > Audio Options > Audio Gain.

3 Do one of the following, and then click OK:

• Enter a Gain value. (0.0 dB equals the clip's original gain.)

• Click Normalize to optimize a clip's audio gain automatically. Adobe Premiere Pro examines levels in the clip. It then determines how much to adjust the audio so that the strongest signals in the clip don't exceed the ceiling level (0dB) and create distortion. The displayed value indicates the amount of gain Adobe Premiere Pro automatically applied.

To adjust the volume in the Timeline panel

1 Expand the track's view by clicking the triangle next to the audio track name.

2 Click the Show Keyframes button ⬚, and choose one of the following from the pop-up menu:

Show Clip Keyframes Lets you edit a clip's audio level.

Show Track Keyframes Lets you edit a track's audio level.

3 If necessary, do one of the following to enable the audio's volume level adjustment:

• To edit a clip's audio level, select an audio clip, click Volume:Level in the audio track, and then choose Volume > Level from the pop-up menu. Be sure that you're editing the correct clip on the track.

• To edit a track's audio level, click Track:Volume in the audio track and choose Track > Volume from the pop-up menu.

Note: Volume adjustment should be enabled by default.

4 Use either the Selection tool or the Pen tool to move the Volume level graph up (increase volume) or down (decrease volume).

Note: If you want the Volume effect to change over time, move the current-time indicator and a add keyframe whenever you make an adjustment. For a uniform level setting, add just one keyframe to the time graph.

See also

"Working with keyframes" on page 230

"Adjusting gain and volume" on page 186

To adjust the volume in the Effect Controls panel

1 Select an audio clip in a sequence.

2 In the Effect Controls panel, click the triangle next to Volume to expand the effect.

3 Do any of the following:

• Enter a value for the level. A negative value decreases the volume level and a positive value increases the volume level. A value of 0.0 represents the original clip's volume level without adjustment.

• Click the triangle next to Level to expand the effect options, and then use the slider to adjust the volume level.

A keyframe is automatically created at the beginning of the clip's timeline in the Effect Controls panel.

4 (Optional) If you're changing the Volume effect over time, move the current-time indicator and adjust the volume level graph in the Effect Controls panel.

Each time you move the current-time indicator and make an adjustment, a new keyframe is created. You can also adjust the interpolation between keyframes by editing the keyframe graph. Repeat as needed.

See also

"About keyframes" on page 230

"To edit keyframe graphs in the Effect Controls panel" on page 238

To set a uniform track output level in the Audio Mixer

❖ In the Audio Mixer, adjust the track's volume setting.

Note: You can use this procedure when automation isn't applied to a track. If levels vary over time because track automation keyframes are already applied, you may be able to adjust the track level uniformly by sending it to a submix and setting the submix level.

To mute a track in the Audio Mixer

❖ Click the track's Speaker icon in the Audio Mixer.

Note: Muting doesn't affect pre-fader items such as effects and sends. Also, the state of the Mute Track button is subject to the automation settings in effect. If you want to silence track output completely, click the track's Speaker icon in the Timeline panel.

See also

"Automating audio changes in the Audio Mixer" on page 199

Audio transitions

Working with audio transitions

Adobe Premiere Pro lets you apply crossfades for audio transitions between clips. An audio fade is analogous to a video transition. For a crossfade, you add an audio transition between two adjacent audio clips on the same track. Adobe Premiere Pro includes two types of crossfade: Constant Gain and Constant Power.

The Constant Gain crossfade changes audio at a constant rate in and out as it transitions between clips. This crossfade can sometimes sound abrupt.

The Constant Power crossfade creates a smooth, gradual transition, analogous to the dissolve transition between video clips. This crossfade decreases audio for the first clip slowly at first and then quickly falls off at the end of the transition. For the second clip, this crossfade increases audio quickly at first and then more slowly as it reaches the end of the transition.

Constant Power is the default audio transition. To specify the default audio transition, right-click either Constant Gain or Constant Power in the Effects panel and choose Set Selected As Default Transition from the context menu.

To set a default duration for the audio transitions, choose Edit > Preferences > General. In the Preferences dialog box, enter a value for the Audio Transition Default Duration.

See also

"Clip handles and transitions" on page 164

"Transition workflow" on page 163

To crossfade between two audio clips

1 If necessary, click the triangle to the left of each track name in the Timeline panel to expand the audio tracks that you want to crossfade.

2 Make sure that the two audio clips are adjacent.

3 Do one of the following:

• To add the default audio transition, move the current-time indicator to the edit point between the clips, and choose Sequence > Apply Audio Transition.

• To add an audio transition other than the default, expand the Audio Transitions bin in the Effects panel and drag the audio transition to the Timeline panel, on the edit point between the two clips you want to crossfade.

To apply fade in or fade out to the audio of a clip

1 Make sure that the audio track is expanded in the Timeline panel. If necessary, click the triangle to the left of the track name to expand the audio tracks that you want to crossfade.

2 Do any of the following:

• To fade in a clip's audio, drag an audio transition from the Effects panel to the Timeline panel so that it snaps to the In point of the audio clip. You can also double-click the applied transition in the Effects Controls and choose Start At Cut from the Alignment pop-up menu.

• To fade out a clip's audio, drag an audio transition from the Effects panel to the Timeline panel so that it snaps to the Out point of the audio clip. You can also double-click the applied transition in the Effect Controls panel and choose End At Cut from the Alignment pop-up menu.

To adjust or customize an audio transition

❖ Do any of the following:

• To edit an audio transition, double-click the transition in the Timeline panel and adjust the transition in the Effect Controls panel.

• To customize the rate of an audio fade or crossfade, adjust the clip's audio volume keyframe graph instead of applying a transition.

See also

"Adjusting gain and volume" on page 186

Panning and balancing

About panning and balancing

By default, all audio tracks output to the sequence's master audio track. Because tracks may contain different numbers of channels than the master (depending on whether they are mono, stereo, or 5.1 surround tracks), it's necessary to control what happens when a track outputs to another track containing a different number of channels.

Panning is the moving of audio from one channel to another. You can use panning to position an audio channel within a multichannel track. For example, if a car drives by on the right side of a video frame, you can pan the channel with the car's audio so that you hear it on the right side of the multichannel audio field.

Balancing redistributes multichannel audio track channels among the channels of another multichannel track. Balancing is distinct from panning in that spatial information is already encoded in multiple channels. Balancing simply alters their relative proportions.

Note: If necessary, you can balance a clip by applying the Balance audio effect. Do this only after you determine that track balancing isn't sufficient.

The relation between the number of channels in an audio track and the number of channels in the output track (often the master track) determines whether the pan and balance options are available for an audio track. In the Audio Mixer, the number of level meters in a track indicates the number of channels for that track with the output track displayed in the Track Output Assignment pop-up menu at the bottom of each track. The following rules determine whether a track's audio can be panned or balanced in its output track:

• When you output a mono track to a stereo or 5.1 surround track, you can pan it.

• When you output a stereo track to a stereo or 5.1 surround track, you can balance it.

• When the output track contains fewer channels than in the other audio tracks, Adobe Premiere Pro downmixes the audio to the number of channels in the output track.

• When an audio track and the output track are mono or when both tracks are 5.1 surround, panning and balancing are not available. The channels of both tracks correspond directly.

While the master audio track is the default output track, a sequence can also include submix tracks. Submix tracks can be both an output destination of other audio tracks and an audio source to the master track (or other submix tracks). Therefore, the number of channels in a submix track affects the pan or balance controls available in tracks that output to it, and the number of channels in the submix's output track affects whether panning or balancing is available for that submix track.

See also

"Downmixing to fewer channels" on page 195

"Working with submixes" on page 192

Panning and balancing in the Audio Mixer

The Audio Mixer provides controls for panning and balancing. A round knob appears when a mono or stereo track outputs to a stereo track. You rotate the knob to pan or balance audio between the left and right output track channels. A square tray appears when a mono or stereo track outputs to a 5.1 surround track. The tray depicts the two-dimensional audio field created by 5.1 surround audio. You slide a puck within the tray to pan or balance audio among the five speakers, which are represented by pockets around the edge of the tray. The tray also includes controls for adjusting a 5.1 surround audio track's center channel percentage and subwoofer volume. No pan control appears if a track outputs to a submix or master track that contains the same number of channels or fewer; therefore, a pan or balance control is never available for a 5.1 surround track. A master track doesn't contain a pan or balance control because it is never routed to another track. However, panning or balancing an entire sequence is possible when you use the sequence as a track in another sequence.

You can vary the pan setting over time in the Audio Mixer, or in the Timeline panel by applying keyframes to a track's Pan options.
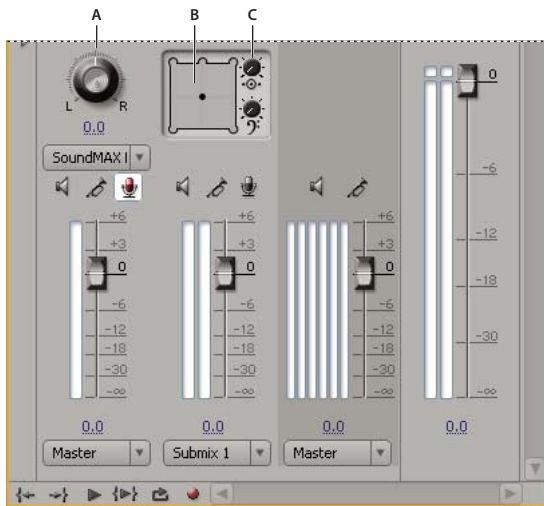
Panning and balancing controls
A. *Stereo pan/balance knob* **B.** *5.1 surround pan/balance tray* **C.** *Center percentage*

💡 *For best results monitoring pan or balance settings, make sure that each of your computer or audio card's outputs is connected to the correct speaker, and make sure that positive and negative wires are connected consistently across all speakers.*

See also

"Working with keyframes" on page 230

To pan or balance a track routed to a stereo track

❖ In the Audio Mixer, do one of the following:

• Drag the pan control knob or the value below the knob.

• Click the value below the pan control knob, type a new value, and press Enter.

To pan or balance a track routed to a 5.1 surround track

1 In the Audio Mixer, click and drag the puck anywhere within the tray. To snap the puck to a left, right, or center channel, drag the puck to a pocket along the edge of the tray.

2 Adjust the center channel percentage by dragging the center percentage knob.

3 If needed, adjust the LFE (subwoofer) channel level by dragging the knob above the Bass Clef icon 𝄢 .

To pan or balance a track in the Timeline panel

1 In the Timeline panel, if necessary, expand a track's view by clicking the triangle next to the track name.

2 Click the Show Keyframes button 🔍, and choose Show Track Keyframes from the pop-up menu.

3 Click Track:Volume at the top left corner of the track and then choose Panner > Balance or Panner > Pan from the pop-up menu. (For 5.1 surround audio, choose the dimension you want to edit from the Panner menu.)

4 (Optional) If you are adjusting the pan or balance effect over time, move the current-time indicator and click the Add/Remove Keyframe icon ◉ .

5 Use the Selection tool or the Pen tool to adjust the level.

6 (Optional) If you're adjusting the pan or balance effect over time, repeat steps 4 and 5 as necessary.

See also

"Working with keyframes" on page 230

Advanced mixing

Working with submixes

A *submix* is a track that combines audio signals routed to it from specific audio tracks or track sends in the same sequence. A submix is an intermediate step between audio tracks and the master track. Submixes are useful when you want to work with a number of audio tracks in the same way. For example, you can use a submix to apply identical audio and effect settings to three tracks of a five-track sequence. Submixes can help make the best use of your computer's processing power by allowing you to apply one instance of an effect instead of multiple instances.

Like audio tracks that contain clips, submixes can be mono, stereo, or 5.1 surround. Submixes appear as fully functional tracks in both the Audio Mixer and the Timeline panel—you can edit submix track properties just as you edit a track containing audio clips. However, submixes are different from audio tracks in the following ways:

• Submix tracks can't contain clips, so you can't record to them. Therefore, they don't contain any recording or device input options or clip editing properties.

• In the Audio Mixer, submixes have a darker background than other tracks.

• In the Timeline panel, submixes don't have a Toggle Track Output icon 🔊 or a Display Style icon 🎚 .

**To create a submix in the Timeline panel**

1 Choose Sequence > Add Tracks.

2 Specify options in the Audio Submix Tracks section, and then click OK.

To simultaneously create a submix and assign a send

1 If necessary, display the effects/sends panel in the Audio Mixer by clicking the triangle to the left of an automation option's pop-up menu.

2 Choose Create Mono Submix, Create Stereo Submix, or Create 5.1 Submix from any of the five sends list pop-up menus in the Audio Mixer.
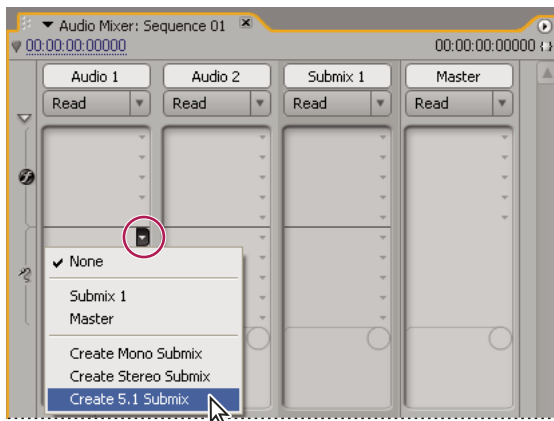
Choosing a submix type in the Audio Mixer

To route a track's output to a submix

❖ In the Audio Mixer, select the submix name from the track output menu at the bottom of the track.

About sends

Each track contains five sends, located in the Effects And Sends panel in the Audio Mixer. Sends are often used to route a track's signal to a submix track for effects processing. The submix can return the processed signal to the mix by routing it to the master track, or it can route the signal to another submix. A send includes a level knob that controls the ratio of the send track volume to the submix volume. This value is called the wet/dry ratio, with "wet" referring to the effects-processed submix signal and "dry" referring to the signal from the send track. A wet/dry ratio of 100% indicates that the wet signal is output at full strength. The submix volume affects the wet signal, and the send track's volume affects the dry signal.

A send can be applied pre-fader or post-fader, which determines whether the track audio is sent before or after the track's volume fader is applied. With a pre-fader send, adjusting the track fader doesn't affect the output level from the send. A post-fader send maintains the wet/dry ratio, fading the wet and dry signals simultaneously as you adjust the send track's volume.

See also

"Routing track output" on page 196

To send a track to a submix

1 (Optional) To display the Effects And Sends panel in the Audio Mixer, click the Show/Hide Effects And Sends triangle at the left side of the Audio Mixer.

2 In the Effects And Sends panel, do one of the following:

• To send to an existing submix, click a Send Assignment Selection triangle and choose a submix name from the pop-up menu.

• To create and send a new submix, click a Send Assignment Selection triangle and choose one of the following: Create Mono Submix, Create Stereo Submix, or Create 5.1 Submix.
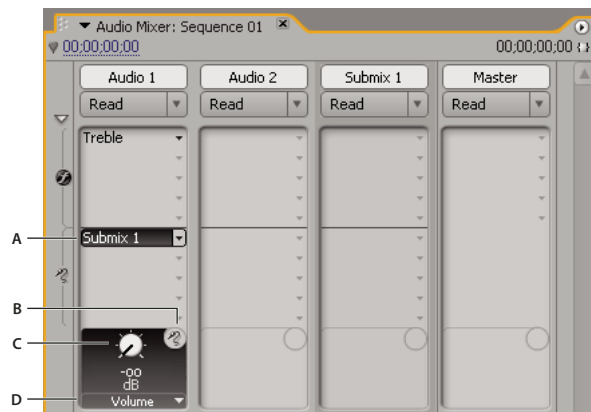
Sends
A. Name of submix assigned to send, and Send Assignment pop-up menu B. Send mute C. Control knob for selected send property D. Send Properties pop-up menu

To edit send settings

1 (Optional) To display the Effects And Sends panel in the Audio Mixer, click the Show/Hide Effects And Sends triangle at the left side of the Audio Mixer.

2 In the Effects And Sends panel, click the Send Assignment Selection triangle and choose a send from the pop-up menu.

3 (Optional) Choose the send property you want to edit from the Selected Parameter menu below the selected send property control.

Choosing from the Selected Parameter menu

4 Change the value of the property using the control knob above the send assignment properties menu at the bottom of the sends list.
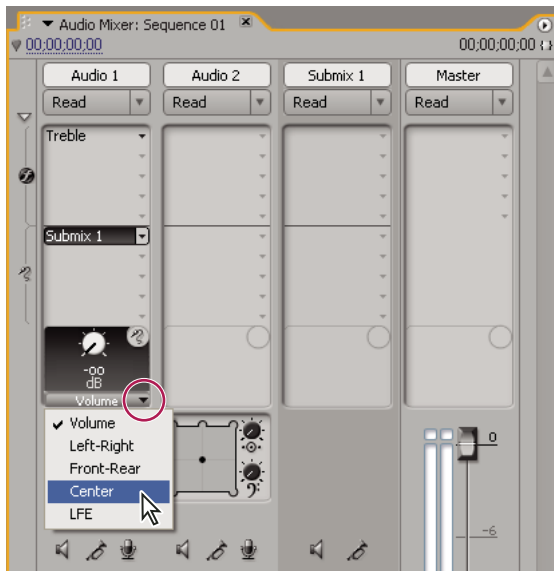
To work with sends

1 (Optional) To display the Effects And Sends panel in the Audio Mixer, click the Show/Hide Effects And Sends triangle at the left side of the Audio Mixer.

2 Do any of the following:

• To designate a send as a pre-fader or post-fader, right-click a send and choose Pre-Fader or Post-Fader from the context menu.

• To mute a send, click the Send Mute button [icon] next to the send control knob for the selected send property.

• To delete a send, choose None from the Send Assignment Selection pop-up menu.

Downmixing to fewer channels

Whenever you route track output to a track or device with fewer channels, Adobe Premiere Pro must *downmix* the audio to the number of channels in the destination track. Downmixing is often practical or necessary because a sequence's audio may be played back on audio gear supporting fewer audio channels than your original mix. For example, you might create a DVD with 5.1 surround audio, but some of your customers may use speaker systems or televisions that support only stereo (2 channels) or mono (1 channel). However, downmixing can also occur in your project when you assign track output to a track that has fewer channels. Adobe Premiere Pro provides a 5.1 Mixdown Type option that lets you choose how to translate 5.1 surround audio into stereo or mono audio. You can choose from various combinations of Front channels, Rear channels, and the LFE (low-frequency effects, or subwoofer) channel.

To translate 5.1 audio to stereo or mono

1 Choose Edit > Preferences > Audio.

2 Choose a 5.1 Mixdown Type from the pop-up menu, and click OK.

Note: If you want to preserve the integrity of left/right channel assignments, you may want to avoid using downmix options that include the LFE channel.

Routing track output

By default, track output is routed to the master track. You can also route the complete track signal to a submix track or master track by using the Track Output Assignment pop-up menu at the bottom of each track in the Audio Mixer. The output signal contains all properties specified for that track, including automation, effects, pan/balance, solo/mute, and fader settings. In the Audio Mixer, all submixes are grouped to the right of all audio tracks. You can output a track to any submix, but to prevent feedback loops, Adobe Premiere Pro allows a submix to be routed only to a submix to the right of it, or to the master track. The output pop-up menu lists only the tracks that follow these rules.

Note: It's possible to create a send/return arrangement with an effects submix.

See also

"About sends" on page 193

To route or turn off track output

❖ Do any of the following:

• To route track output to another track, select a submix or Master from the Track Output Assignment pop-up menu at the bottom of each track in the Audio Mixer.

• To completely turn off track output, click the Toggle Track Output icon 🔊 to hide the speaker icon for a track in the Timeline panel. This causes the track to output no signal but doesn't change its signal routing.

Applying effects to audio

Applying audio effects to clips

In the Effects panel, you can find audio effects inside the Audio Effects bin. Depending on the number of channels in the audio track, you apply effects from either the 5.1, Stereo, or Mono bins.

You apply and edit audio clip effects much as you apply effects to video clips: select a clip in the Timeline panel and drag an audio effect onto the clip or into the Effect Controls panel, and then adjust the effect options in the Effect Controls panel. You adjust options by entering values, dragging sliders, scrubbing underlined text, or manipulating the graph in the Effect Controls timeline.

Note: The Volume effect is a fixed effect that is automatically applied to every sequence clip containing audio. The Volume effect can be adjusted in the Effect Controls panel or by manipulating the graph in the Timeline panel.

Applying audio effects in the Audio Mixer

In the Audio Mixer, track effect options are controlled after an effect is selected in the Effects And Sends panel. If the Effects and Sends panel is not visible, you can display it by clicking the Show/Hide Effects And Sends triangle on the left side of the Audio Mixer. The Effects And Sends panel contains Effect Selection pop-up menus to apply up to five track effects. Adobe Premiere Pro processes effects in the order they are listed and feeds the result of an effect into the next effect in the list; therefore, changing the order can change the results. The effects list also provides full control over VST plug-ins you have added. Effects applied in the Audio Mixer can also be viewed and edited in the Timeline panel.

An effect can be applied pre-fader or post-fader. This determines whether the effect is applied before or after the application of the track's fader. Effects are pre-fader by default.

In the Audio Mixer, effect options that change over time can be recorded using the automation options or specified in the Timeline panel by using keyframes.
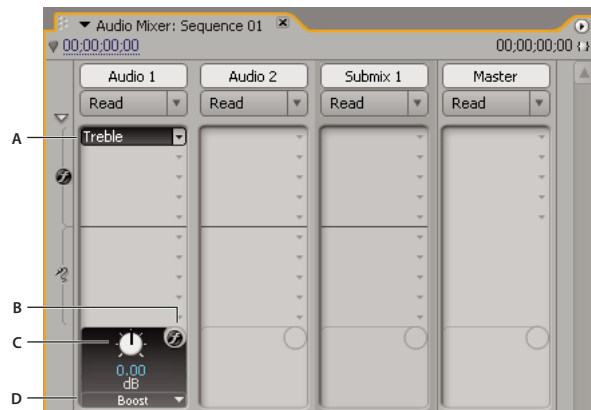
Audio effects
A Name of applied effect, and effect pop-up menu B. Effect bypass C. Control knob for selected effect property D. Effect properties pop-up menu

💡 *If you plan to use the same effect repeatedly, consider conserving system resources by sharing effects through a submix. Create a submix, apply the effect to the submix, and use sends to route tracks to the submix for effects processing.*

See also

"Working with VST effects" on page 198

"Automating audio changes in the Audio Mixer" on page 199

"About sends" on page 193

"Working with submixes" on page 192

To apply a track effect in the Audio Mixer

1 (Optional) To display the Effects And Sends panel in the Audio Mixer, click the Show/Hide Effects And Sends triangle at the left side of the Audio Mixer.

2 In the track that you want to apply an effect, click the Effect Selection triangle and choose an effect from the pop-up menu.

Consider planning the order of track effects before applying them because you can't drag an effect to a different position in the Effects And Sends panel.

3 If needed, choose the effect parameter you want to edit from the pop-up menu at the bottom of the Effects And Sends panel.

4 Use the controls above the parameter pop-up menu to adjust the effect options.

Note: For certain VST plug-in effects, you can adjust the effect options in a separate window containing option controls. Double-click the track effect name to open a VST editor window. Close the window after making the adjustments.

To designate a track effect as pre-fader or post-fader

❖ In the Effects And Sends panel of the Audio Mixer, right-click an effect and choose Pre-Fader or Post-Fader.

To edit track effects in the Timeline panel

1 In the Timeline panel, expand a track's view, if necessary, by clicking the triangle next to the track name.

2 Click the Show Keyframes button , and choose Show Track Keyframes from the menu that appears.

3 Click the pop-up menu at the top left corner of the track (it appears with Track:Volume as the default selection); then choose the effect name and property from the pop-up menu. (Pre-fader effects appear at the top of the menu; post-fader effects appear at the bottom. The numbers in the effect names refer to their position in the track effects list [rendering order]).

4 Use the Pen tool to adjust the level uniformly (if keyframes have not been added) or to add or edit keyframes.

See also

"Working with keyframes" on page 230

To remove or bypass a track effect in the Audio Mixer

❖ In the effects list in the Audio Mixer, do one of the following:

• To remove a track effect, click the triangle to the right of the effect you want to remove, and choose None.

• To bypass a track effect, click the Effects Bypass button near the bottom of the effects list until it appears with a slash.

Working with VST effects

Adobe Premiere Pro supports the Steinberg VST (Virtual Studio Technology) audio plug-in format so that you can add VST audio effects from third-party vendors. Adobe Premiere Pro includes VST plug-in effects that are available in both the Audio Mixer and the Effect Controls panel. Track-based VST plug-ins may provide additional controls. Apply VST effects the same way you apply other audio effects to tracks or clips.

In the Effects And Sends panels of the Audio Mixer, VST effects appear in the Effect Selection pop-up menus. In the Effects panel, they appear in the Audio Effects bin so you can apply them to individual clips. In most cases, VST effects appear in the Audio Effects bin and track type that corresponds to the number of channels the effect supports. For example, stereo VST effects appear in the Audio Mixer track effect pop-up menus for stereo tracks only, and in the Stereo bin in the Audio Effects bin in the Effects panel. After you apply VST effects, you can open a window with all of its controls. You can leave multiple VST editor windows open as long as you want, such as when automating effects, but Adobe Premiere Pro closes all VST editor windows when you close the project.

If you previously installed a VST-compatible application other than Adobe Premiere Pro, Adobe Premiere Pro finds VST effects in the VST folder that already exists. If no other VST-compatible applications are installed, Adobe Premiere Pro creates a folder called VST in the Program Files folder. Inside the Plug-ins folder of the Adobe Premiere Pro application folder, there is also a VST folder with plug-ins that are used only by Adobe Premiere Pro.

Note: When you use a VST effect not provided by Adobe, the specific control layout and results of the plug-in are the responsibility of the plug-in manufacturer. Adobe Premiere Pro only displays the controls and processes the results.

See also

"Applying audio effects in the Audio Mixer" on page 197

To adjust a VST effect in a VST editor window

The Audio Mixer lets you open a VST editor window (for certain VST effects) to adjust the effect options.

Note: You can't open a VST editor window from the Effect Controls panel.

1 (Optional) Click the Show/Hide Effects And Sends triangle on the left side of the Audio Mixer to display the Effects And Sends panel.

2 In the Effects And Sends panel, do any of the following:

• Right-click an effect name and choose Edit from the pop-up menu.

• Double-click an effect name.

The VST editor window opens.

Note: The option controls for VST plug-in effects are also available at the bottom of the Effects And Sends panel.

3 In the VST editor window, specify the options and close the window when you're done.

To select a preset for a VST effect

❖ Right-click the effect name in the Effects And Sends panel of the Audio Mixer, and choose a preset listed at the bottom of the pop-up menu.

Note: If an effect doesn't support presets, Default is the only choice. Default resets all option values for the effect.

Automating audio changes

Automating audio changes in the Audio Mixer

You can use automation to apply changes to an audio track's settings as a sequence plays back. You can automate the volume, pan, and mute settings of a track or its sends. For track effects, you can automate all effect options, including the bypass setting.

Automation modes are set in the pop-up menu at the top of each track. For example, with automation set to Latch, Touch, or Write, drag a track's volume fader or pan control during playback. When you play back audio with a track's automation pop-up menu set to Read, Touch, or Latch, Adobe Premiere Pro plays back the track with the automated adjustments. As you make adjustments in the Audio Mixer, Adobe Premiere Pro applies your changes by creating track keyframes in the Timeline panel. Conversely, track keyframes you add or edit in the Timeline panel automate values (such as fader positions) in the Audio Mixer as the audio plays back.

For each audio track, the selection in the automation options menu determines the track's automation state during the mixing process:

Off Ignores the track's stored settings during playback. Off allows real-time use of Audio Mixer controls without interference from stored automation settings.

Read Reads the track's automation settings and uses them to control the track during playback. If a track has no settings, adjusting a track option (such as volume) affects the entire track uniformly. If you adjust an option for a track that's set to Read automation, the option assumes its former value (before the current automated changes were recorded) when you stop adjusting it. The rate of return is determined by the Automatch Time preference.

Write Records adjustments you make to any automatable track settings that are not set to Safe During Write, and creates corresponding track keyframes in the Timeline panel. Write mode writes automation as soon as playback starts without waiting for a setting to change. You can modify this behavior by choosing the Switch To Touch After Write command from the Audio Mixer menu. After playback stops or a playback loop cycle completes, the Switch To Touch After Write command switches all Write mode tracks to Touch mode.

Latch Identical to Write, except that automation does not start until you begin adjusting a property. The initial property settings are from the previous adjustment.

Touch Identical to Write, except that automation does not start until you begin adjusting a property. When you stop adjusting a property, its option settings return to their previous state before the current automated changes were recorded. The rate of return is determined by the Automatch Time audio preference.

If you want to preserve the settings of a property, right-click an effect or send and choose the Safe During Write command from the pop-up menu. This command prevents that property from being edited when Write automation mode is on. It also protects that property across all tracks in a sequence.

See also

"To set Automatch Time for Touch mode" on page 201

"Working with keyframes" on page 230

To automate track properties over time using the Audio Mixer

1 In the Audio Mixer or Timeline panel, set the current time to the point where you want to start recording automation changes.

Note: In the Audio Mixer, you can set the current time at the top left corner of the panel.

2 In the Audio Mixer, choose an automation mode from the Automation Mode menu at the top of each track you want to automate.

3 (Optional) To protect the settings of a property during the Write automation mode, right-click an effect or send and then select Safe During Write from the pop-up menu.

4 In the Audio Mixer, do one of the following:

• To start automation, click the Play button ▶ in the Audio Mixer.

• To play the sequence in a continuous loop, click the Loop button ⟳ .

• To play from the In point to the Out point, click the Play In To Out button ⟨▶⟩ .

5 As the audio plays back, adjust the options of any automatable property.

6 To stop automation, click the Stop button ■ .

7 To preview changes, reset the current time to the beginning of your changes, and click the Play button.

To preserve a track property during Write automation

❖ In the Effects And Sends panel for a track, right-click an effect or send and choose Safe During Write from the pop-up menu.

Note: Use the Audio Mixer to automate track properties only, not clip properties. You can edit clip keyframes by selecting the clip and using the Effect Controls panel or Timeline panel.

To set Automatch Time for Touch mode

When you stop adjusting an effect property in Touch mode, the property returns to its initial value. The Automatch Time preference specifies the time for an effect property to return to its initial value.

1 Choose Edit > Preferences > Audio.

2 Enter a value for Automatch Time and then click OK.

To specify the automated keyframe creation

Automating audio changes in the Audio Mixer can create more keyframes than necessary in the audio track, degrading performance. To avoid creating unnecessary keyframes, thereby ensuring both quality interpretation and minimal performance degradation, set the Automation Keyframe Optimization preference. In addition to providing other benefits, this preference makes editing individual keyframes easier because they are less densely arranged on the keyframe graph.

1 Choose Edit > Preferences > Audio.

2 In the Automation Keyframe Optimizations area, select one or both of the following options, and then click OK:

Linear Keyframe Thinning Creates keyframes only at points that do not have a linear relationship to the start and end keyframes. For example, suppose you are automating a fade from 0 dB to –12 dB. With this option selected, Adobe Premiere Pro creates keyframes only at the points that represent an increase in value from the beginning (0 dB) and ending (–12 dB) keyframes. If you do not select this option, Adobe Premiere Pro may create several incremental keyframes of identical values between those two points, depending on the speed at which you change the value. This option is selected by default.

Minimal Time Interval Thinning Creates keyframes only at intervals larger than the value that you specify. Enter a value between 1 and 2000 milliseconds.

Editing audio in Adobe Audition

About editing audio in Adobe Audition

Although Adobe Premiere Pro has many tools and effects for working with audio, you may sometimes need to use advanced techniques to edit the audio. If you have Adobe Audition 2.0 installed on your computer, you can use the Edit In Audition command to send audio from clips to Adobe Audition for advanced audio editing. This feature simplifies the process of exporting audio to an external audio editing application and then importing the edited audio back into Adobe Premiere Pro.

When you apply the Edit In Audition command to an audio clip, the audio is extracted and the edits are made to a new clip containing the extracted audio. The audio in the original master video clip is preserved.

When applying the Edit In Audition command to clips in a sequence, the audio is rendered in a new audio clip that is edited in Adobe Audition. The edited clip replaces the original clip in the Timeline panel; the original master clip in the Project panel is untouched. Effects or markers applied to the original sequence clip are preserved in the edited clip.

It's possible to edit the audio in Adobe Audition multiple times. For subsequent edits in Adobe Audition, Adobe Premiere Pro sends the audio clip that it created for the initial editing session.

In the Project panel, the Undo command deletes the extracted audio clip that's been edited in Adobe Audition. For a clip in a sequence, the Undo command reverses the render and replace actions by returning the original audio clip to the sequence. In this case, the newly created audio file is not deleted from the Project panel.

Note: The Edit In Audition command isn't available for Adobe Dynamic Link clips.

To edit audio in Adobe Audition from the Project panel

1 In the Project panel, select a file containing audio.

2 Choose Edit > Edit In Adobe Audition.

The audio is extracted from the original clip and a new audio clip is created, which appears in the Project panel. The new audio file opens in Adobe Audition. The original audio in the master clip is preserved.

3 Edit and save the audio file in Adobe Audition.

4 Return to Adobe Premiere Pro. The audio file remains open in Adobe Audition until you close it.

Note: The Edit In Audition (Extract Audio) command does not replace the original audio in a video master clip. When you add the video master clip to a sequence, you must do the following if you want the new edited audio to accompany the video: unlink and delete the instance of the audio, and then replace the audio with the new edited audio clip.

To edit audio in Adobe Audition from the Timeline panel

1 In the Timeline panel, select a clip containing audio.

2 Choose Edit > Edit In Adobe Audition (Render And Replace).

The clip's audio is rendered in a new audio file, which opens in Adobe Audition. The new audio file also appears in the Project panel.

3 Edit and save the audio file in Adobe Audition.

4 Return to Adobe Premiere Pro. The audio file remains open in Adobe Audition until you close it.

In the Timeline panel, the selected clip's audio is replaced with the new audio file edited in Adobe Audition. The original master clip in the Project panel is preserved.

Note: If you choose the Undo command, the original audio is restored to the clip in the Timeline panel, but the newly created audio file from Audition is preserved in the Project panel.

Chapter 11: Using the Titler

Creating titles

About the Titler

You can design custom titles and logos with the Adobe Premiere Pro Titler feature. Titles are a valuable addition to a movie and can serve many purposes, from naming the people and places in your movie to providing movie-style credits at the beginning and end. You can create titles using any font installed on your computer, and other graphic objects using the Titler's shape creation tools. You can create logos from any graphic or photograph on your computer and use them to further customize and enhance your movies.

With the Titler, you can either create your titles and logos from scratch by using the text and shape tools, or you can use one of the included templates, preset text styles, and images to quickly create an attractive title.

Although the Titler panel provides the main drawing area, you can also think of the Titler as a "suite" of several related panels. You can close the other panels without closing the Titler panel, or you can dock the panels to each other or to other parts of the Adobe Premiere Pro interface. When the Titler's windows aren't docked to the main editing interface, they always appear over the other panels, or float.

Adobe Title Designer
A. Titler tools B. Titler main panel C. Title properties D. Titler actions E. Titler styles

💡 *Adobe periodically provides updates to software and Help. To check for updates, click the Open Preferences Dialog button   in Adobe Help Center, and then click Check For Updates. Follow the on-screen instructions.*

About titles

You can open the Titler and start a new title using a menu command or the Project Panel's New Item button. You can load more than one title into the Titler panel, and you can choose the one you want to view by choosing its name in the panel menu. (Click the down-pointing triangle in the Titler tab to open the panel menu.)

When you save a title, Adobe Premiere Pro adds it to the active bin in the Project panel automatically. Titles are saved as part of the project. However, you can export titles as independent files that use the .prtl file-name extension. If the title you want to use is on your hard disk but not yet part of the current project, you can import it as you would any other source file.

Unlike other clips, titles reopen in the Titler, not the Source Monitor. Reopen a title when you want to change it or to duplicate it and base a new version on it. If you want to use a title in another project, you must first open its project and export the title using the File > Export > Title command. Then you can import it into another project as you would any other source file.

Note: Before 2.0, Adobe Premiere Pro saved all titles as independent files separate from the project file. You can import titles created in older versions of Premiere Pro just as you import any footage. When you save the project, the imported titles are saved with the project.

To create a new title

1 Do one of the following:

- Choose File > New > Title.
- Choose Title > New Title and then choose a title type.
- In the Project panel, press the New Item button ▣, and choose Title.

2 Specify a name for the title and click OK.

3 Use the Titler's text and shape tools to create a new file or to customize a template.

4 Close the titler or save the project to save the title.

Note: Titles are added to the Project panel automatically and are saved as part of the project file.

To create a title based on the current title

1 In the Titler, open or select the title on which you want to base a new title.

2 Click the New Title Based On Current Title button ▣ .

3 In the New Title dialog box, enter a name for the new title and click OK.

4 Make any changes you want to the new title.

5 Close the Titler or save the project to save the title.

To open a title in the active project

❖ Double-click the title in the Project panel or in the Timeline panel.

Note: Titles open in the Titler, not the Source Monitor.

To import a title file

1 Choose File > Import.

2 Select a title and click Open.

Note: In addition to importing Adobe Premiere Pro titles with the .prtl extension, you can import titles with the .ptl extension, created in Adobe Premiere Elements and earlier versions of Adobe Premiere. The imported titles become part of the current project file.

To export a title as an independent file

1 In the Project panel, select the title you want to save as an independent file.

2 Choose File > Export > Title.

3 Specify a name and location for the title and click Save.

Using title templates

About templates

The title templates included with Adobe Premiere Pro provide numerous themes and preset layouts that make it quick and easy to design a title. Some templates include graphics that may be pertinent to your movie's subject matter, such as new baby or vacation themes. Others include placeholder text that you can replace to create credits for your movie. Some templates have transparent backgrounds, represented by dark gray and light gray squares, so that you can see your video beneath the title; others are completely opaque.

You can easily change every element in the template by selecting the element and either deleting it or overwriting it. You can also add elements to the template. After you modify the template, you save it as a title file for use in current and future projects.

Note: When you apply a new template, its content replaces any content currently in the Titler.

If you share templates, make sure that each system includes all the fonts, textures, logos, and images used in the template.

See also

"Adding images" on page 217

"To load a texture" on page 222

To load a template

1 With a title open, choose Title > New Title > Based On Template.

2 Click the triangle next to a category name to expand it.

3 Select the template, and then click OK.

To import a saved title file as a template

1 With a title open, choose Title > Templates.

2 Choose Import File As Template from the Templates menu.

3 Select a file, and click Open. You can import only Adobe Premiere Pro title files (.prtl) as templates.

4 Give the template a name and then click OK.

To set or restore a default template

1 With a title open, choose Title > Templates and select a template.

2 Do one of the following:

• To set a default template, choose Set Template As Default Still from the Templates menu. The default template loads each time you open the Titler.

• To restore the default set of templates, choose Restore Default Templates from the Templates menu and click Close.

To rename or delete a template

1 With a title open, choose Title > Templates and select a template.

2 Do one of the following:

• To rename a template, choose Rename Template from the Templates menu. Type a name in the Name text box, and click OK.

• To delete a template, choose Delete Template from the Templates menu, and then click Yes.

Note: If you delete a template using this procedure, it is removed from the hard disk.

To create a template from an open title

1 With a title open, choose Title > Templates.

2 In the Templates menu, choose Save *[current title name]* As Template. Click the Templates menu button ⏵ above the template preview image to view the menu.

3 Enter a name for the title template, and then click OK.

Designing titles for television

To show a frame of video behind the title

If you are creating a title for a specific segment of your movie, for example, to name a scene or identify a person, you can view a frame of that footage in the drawing area as you create the title. Viewing the frame helps you place elements in your title. The video frame is for your reference only; it is not saved as part of the title.

You can use the Titler's timecode controls to specify the frame you want to display. The Titler's time display corresponds to the current time in the active sequence. Therefore, setting the frame in the Titler also sets the current frame in the Program Monitor and Timeline panel, and vice versa.

💡 *If you want to superimpose a title over another clip, add the title to the track directly above the clip. Premiere Pro automatically makes the title's background transparent, revealing the image of clips in lower tracks.*

1 In the Titler panel, select Show Video.

2 Do one of the following:

• To change the frame interactively, drag the time value next to Show Video until the frame is visible in the drawing area.

• To display the frame by specifying its timecode, click the time value next to Show Video and enter the frame's timecode in the active sequence.

Note: The Titler's Show Video value uses the same time display format specified in the project settings. For example, if you are working in a PAL project, the Show Video value represents PAL timecode.

About title-safe and action-safe margins

The title-safe and action-safe margins in the Titler's drawing area designate the title's visible safe zones. These margins are on by default.

Safe zones are useful when you edit for broadcast and videotape. Most consumer TV sets use a process called *overscan*, which cuts off a portion of the outer edges of the picture, allowing the center of the picture to be enlarged. The amount of overscan is not consistent across TVs. To ensure that everything fits within the area that most TVs display, keep text within the title-safe margins, and all other important elements within the action-safe margins.

Note: If you are creating content for the web or for CD, the title-safe and action-safe margins do not apply to your project because the entire image is displayed in these media.
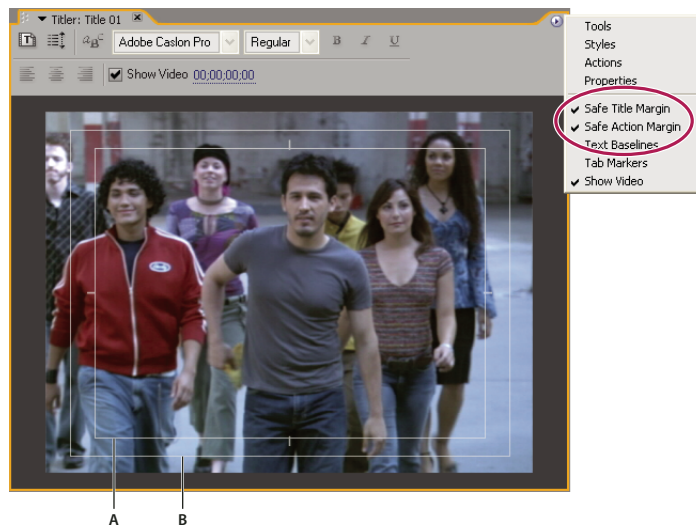
Choosing Safe Title Margin or Safe Action Margin from Titler panel menu
A. *Safe title* **B.** *Safe action*

Adding text to titles

About text for titles

When adding text to a title, you can use any font that's already on your system, including Type 1 (PostScript˚), OpenType˚, and TrueType fonts. Installing Premiere Pro (and other Adobe applications) adds fonts to the shared Adobe resources.

Depending on the tool you choose in the Titler, you can create *point text* or *paragraph text*. When you create point text, you specify an *insertion point* where you want to begin typing. Typing continues on a single line unless you enable the *word wrap* feature, which continues the text on a new line when it reaches the edge of the title-safe area. When you create paragraph text, you specify a text box in which the text fits. The text in a text box wraps automatically within the borders of the box.

Dragging the corner handle of a point text object scales the text, whereas dragging the corner of a text box reflows the text it contains. If a text box is too small to contain the characters you type, you can resize the it to reveal the hidden text. Text boxes that contain hidden characters have a plus sign (+) on the right side of the box.

You can also create path text. Instead of following a straight baseline, path text follows a curve you create.

Any kind of text can be oriented horizontally or vertically along its baseline or path.

See also

"To reflow paragraph text" on page 211

"To scale objects" on page 220

To type text without boundaries

1 In the Titler Tools panel, do one of the following:

- To type horizontal text, click the Type tool T .

- To type vertical text, click the Vertical Type tool $\lfloor T$.

2 In the drawing area, click where you want to begin, and then type the text.

Note: By default, text does not wrap. To make it wrap when it reaches the title-safe margin, choose Title > Word Wrap. When Word Wrap is deselected, press Enter to begin a new line.

3 When you finish typing, choose the Selection tool and click outside the text box area.

To type horizontal or vertical text in a text box

1 In the Titler, do one of the following:

- To type horizontal text, click the Area Type tool .

- To type vertical text, click the Vertical Area Type tool .

2 In the drawing area, drag to create a text box.

3 Type the text. The text wraps when it reaches the boundaries of the text box.

4 When you finish typing, choose the Selection tool and click outside the text box.

Note: Resizing the text box created with the Horizontal or Vertical Area Type tool resizes only the visible area of the box; the text remains the same size.

To type text along a path

1 In the Titler, click the Path Type tool or the Vertical Path Type tool . Using the path type tools is similar to drawing with a pen tool.

2 In the drawing area, click where you want the text to begin.

3 Click or drag to create a second point.

4 Continue clicking until you create the path shape you want.

5 Type the text. When you type, the text begins along the top or right edge of the path. If necessary, adjust the path by dragging the anchor points. Resizing the text box in this mode resizes only the visible area; the text remains the same size.

6 When you finish, choose the Selection tool and click outside the text box.

See also

"To create shapes" on page 213

To edit and select text

1 Using the Selection tool, double-click the text at the point you want to edit the text or begin a selection. The tool changes to the Type tool, and a cursor indicates the insertion point.

2 Do either of the following:

• To move the insertion point, click between characters or use the Left Arrow and Right Arrow keys.

• To select a single character or group of contiguous characters, drag from the insertion point cursor to highlight the characters.

You can format selected text using controls in the Titler main panel, the Title Properties panel, or menu commands. To format an entire text or graphic object, click the object to select the entire object and then modify its properties.

See also

"About formatting and fonts" on page 209

Formatting text

About formatting and fonts

Whereas some object properties—such as fill color and shadow—are common to all objects you create in the Titler, other properties are unique to text objects. Controls for font, font style, and type alignment are in the Titler panel above the drawing area. Other options are available in the Title Properties panel and the Title menu of the main menu bar.

At any time, you can change the fonts that you use for your titles. If you want to experiment with several fonts, use the Font Browser dialog box. The Font Browser displays all of your installed fonts using a set of default characters, which you can customize.

When you choose a font in the Font Browser, Adobe Premiere Pro immediately applies it to your title. The Font Browser remains open so that you can easily preview another. You can continue changing fonts until you find the right one.

Note: If you share title files with other users, make sure that their computers have the fonts that you used to create the shared title.

To specify a font

❖ Select the text and do one of the following:

• Choose Title > Font and choose a font from the menu.

• Click the Browse button and select a font. Click OK when you finish.

To change characters in the Font Browser

1 Choose Edit > Preferences > Titler.

2 In the Font Browser text box, type up to six characters, and then click OK.

To change the font size

❖ Select the text and do one of the following:

• Choose Title > Size and choose a font size.

• Change the Font Size value in the Title Properties panel.

To change text orientation

1 Select a text object.

2 Choose Title > Orientation and select either Horizontal or Vertical.

See also

"To change paragraph alignment" on page 211

To specify text properties

When you select any object in a title, its properties (fill color, shadow, and so on) are listed in the Title Properties panel. Adjusting values in the panel alters the selected object. Text objects possess a number properties unique to type, such as leading and kerning.

Note: Some text properties are not listed in the Title Properties panel. For example, you can set font, font style, and type alignment either in the Titler panel or in the Title menu. The Title menu also includes options for orientation, word wrap, tabs, and inserting a logo into a text box.

1 Select the text object or range of text you want to modify.

2 In the Title Properties panel, click the arrow next to Properties, and set values for any of the following options:

Font Specifies the font applied to the selected text object. To view a font in its typeface, use the Font Browser.

Font Size Specifies the font's size, in scan lines.

Aspect Specifies the horizontal scale of the selected font. This value is a percentage of the font's natural aspect ratio. Values less than 100% narrow the text. Values above 100% widen the text.

Leading Specifies the amount of space between lines of type. For roman type, leading is measured from the baseline of one line of type to the baseline of the next line. For vertical text, leading is measured from the center of one line of type to the center of the next line. In Adobe Title Designer, the baseline is the line underneath the text. You can apply more than one leading amount within the same paragraph; however, the largest leading value in a line of type determines the leading value for that line.

Note: To turn the text baselines on or off, choose Title > View > Text Baselines. Text baselines appear only when you select the text object.

Kerning Specifies the amount of space you add or subtract between specific character pairs. The value indicates the percentage of character width between the character pairs. Place the cursor at the point where you want to adjust kerning.

Tracking Specifies the amount of space between a range of letters. The value indicates the percentage of character width between the specified range of characters. The direction of the text tracking is based on the justification of the text. For example, center-justified text tracks from the center. Adjusting the tracking is useful when your contiguous text has thick strokes that cause the characters to blend into each other, making them hard to read. Adjust the tracking for all the text in a text box by selecting the text box and changing the Tracking value. You can also adjust the tracking between specific contiguous characters by selecting only those characters and changing the Tracking value.

Baseline Shift Specifies the distance of the characters from the baseline. Raise or lower the selected type to create superscripts or subscripts. Changing the Baseline Shift value affects all characters. Adjust the baseline shift for all the text in a text box by selecting the text box and changing the value. Adjust the baseline shift between specific contiguous characters by selecting only those characters and changing the value.

Slant Specifies the slant of an object, in degrees.

Small Caps When selected, specifies that all selected objects appear in uppercase.

Small Caps Size Specifies the size of the small caps as a percentage of regular height. Adjusting this value changes the size of all characters in the text object with the exception of the leading character. A Small Caps value of 100% sets the text to all capitals.

Underline When selected, specifies that the selected text is underlined. This option is not available for text on a path.

Working with paragraph text

To change paragraph alignment

❖ Select a paragraph text object, and at the top of the Titler panel, do one of the following:

• To align text to the left of its text box, click Left ≣ .

• To center the text in its text box, click Center ≣ .

• To align text to the right side of its text box, click Right ≣ .

To reflow paragraph text

❖ Select a paragraph text object.

• Drag any handle of the paragraph text's bounding box to resize the box.

Using tabs

When you create text using the Horizontal Area Type or Vertical Area Type tools, you can apply tabs in much the same way as you would in a word-processing program. Tabs are especially useful in creating professional-looking rolling credits. You can set multiple tabs within a text box and press the Tab key to move the cursor to the next available tab stop. You can specify a different justification option at each tab stop.

Note: Tabs work exclusively to align the characters within text objects. To align entire text or graphic objects, use the Align command.
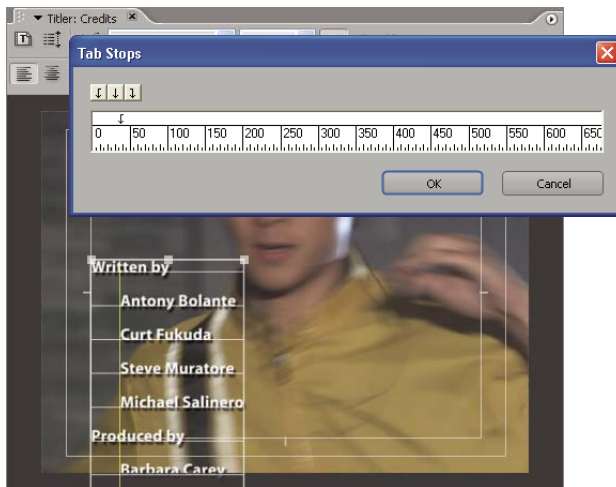
Tab Stops dialog box

See also

"Creating rolls and crawls" on page 227

"Aligning and distributing objects" on page 218

To set and adjust a tab stop

1 Select a text box.

2 Choose Title > Tab Stops.

3 In the Tab Stops dialog box, do one of the following:

• To create a tab stop with left-justified text, click the Left Justify tab marker .

• To create a tab stop with center-justified text, click the Center tab marker .

• To create a tab stop with right-justified text, click the Right Justify tab marker .

4 Click the tab ruler above the numbers to create a tab. Drag the tab stop to adjust its position. As you drag, a yellow vertical line, or *tab marker*, indicates the tab's position in the selected text box.

5 Click OK to close the Tab Stops dialog box. The selected text box contains the tab stops you specified.

Note: To make tab markers visible whenever selected (rather than only when the Tab Stops dialog box is open), choose Title > View > Tab Markers.

To delete a tab stop

❖ In the Tab Stops dialog box, drag the tab up, down, or off the tab ruler.

Adding shapes and images

To create shapes

In addition to creating text objects, you can also use the Titler's drawing tools to create a variety of shapes, such as rectangles, ellipses, and lines. The Titler includes standard pen tools that resemble those used in Adobe Illustrator and Adobe Photoshop.

The pen tools provide the most precise control over straight lines and curves. Using them, you can easily adjust the shape of the connecting paths. You can also quickly add points to or delete points from a segment, or change an anchor point from one type to another.

Once you draw lines or curves, you can either leave the connecting segments open, meaning that the final segment does not return to the original starting point, or you can close the connecting segments by clicking the initial control point.
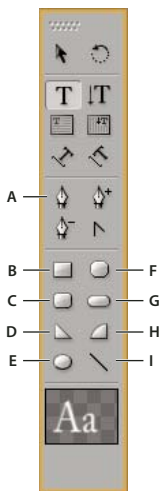
Shape tools
A. *Pen* *B.* *Rectangle* *C.* *Rounded Corner Rectangle* *D.* *Wedge* *E.* *Ellipse* *F.* *Clipped Corner Rectangle* *G.* *Rounded Rectangle* *H.* *Arc* *I.* *Line*

1 Select a shape tool.

2 Do any of the following:

• Shift-drag to constrain the shape's aspect ratio.

• Alt-drag to draw from the center of the shape.

• Shift+Alt-drag to constrain the aspect ratio and draw from the center.

• Drag diagonally across the corner points to flip the shape diagonally as you draw.

• Drag across, up, or down to flip the shape horizontally or vertically as you draw.

To flip the shape after you've drawn it, use the Selection tool to drag a corner point in the direction you want it to flip.

See also

To change the shape of a graphic object or a logo

1 Select one or more objects or logos in a title.

2 In the Title Properties panel, click the triangle next to Properties to expand its list, and then choose an option from the Graphic Type menu.

Note: When you change shapes, the original control points may be lost. To reveal the control points before or after changing the shape, select the object with the Selection tool.

To draw straight segments with the Pen tool

You draw straight lines by clicking the Pen tool in the drawing area. This creates control points, called *anchor points*, that are connected by straight segments.

1 Select the Pen tool.

2 Position the tip of the pen point where you want the straight segment to begin, and click to define the first anchor point. The anchor point remains selected (solid) until you add the next point.

Note: The first segment you draw is not visible until you click a second anchor point. Also, if lines extend from either side of the point, you've accidentally dragged the Pen tool; choose Edit > Undo and click again.

3 Click again where you want the segment to end. (Shift-click to constrain the segment's angle to multiples of 45˚.) This creates another anchor point.

4 Continue clicking the Pen tool to create additional straight segments. The last anchor point you add appears as a large square, indicating that it is selected.

5 Complete the path by doing one of the following:

• To close a path, click the initial anchor point. A circle appears underneath the pen pointer when it is directly over the initial anchor point.

• To leave the path open, Ctrl-click anywhere away from all objects, or select a different tool in the Tools panel.

To draw curves with the Pen tool

Draw curved segments by dragging the anchor points with the Pen tool. Before you draw and modify curved segments with the Pen tool, it's important to understand two elements that are associated with anchor points on curves. When you use the Selection tool to select an anchor point connecting curved segments, the segments display *direction lines*, which end in *direction points*. The angle and length of the direction lines determine the shape and size of the curved segments. Moving the direction lines reshapes the curves. A *smooth point* always has two direction lines that move together as a single, straight unit. When you drag the direction point of either direction line on a smooth point, both direction lines move simultaneously, maintaining a continuous curve at that anchor point. In comparison, a *corner point* can have two, one, or no direction lines, depending on whether it joins two, one, or no curved segments, respectively.

Corner point direction lines maintain the corner by working independently of one another. When you drag a direction point on a corner point's direction line, the other direction line, if present, does not move. Direction lines are always tangent to (perpendicular to the radius of) the curve at the anchor points. The angle of each direction line determines the slope of the curve, and the length of each direction line determines the height, or depth, of the curve.

1 Select the Pen tool.

**2** Position the cursor where you want the curve to begin. Hold down the mouse button.

3 Drag to create direction lines that determine the slope of the curve segment you're creating. In general, extend the direction line about one third of the distance to the next anchor point you plan to draw. Shift-drag to constrain the direction line to multiples of 45 ˚.

4 Release the mouse button.

Note: The first segment will not be visible until you draw the second anchor point.

5 Position the Pen tool where you want the curve segment to end, and then do one of the following:

• To create a C-shaped curve, drag in a direction opposite to the direction that you dragged to create the previous anchor point.
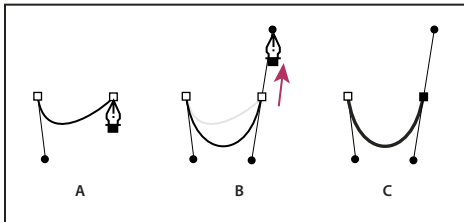
Drawing second point in curves
A. Starting to drag second smooth point B. Dragging away from previous direction line, creating C-shaped curve C. Result after releasing mouse button

• To create an S-shaped curve, drag in the same direction that you dragged to create the previous anchor point.
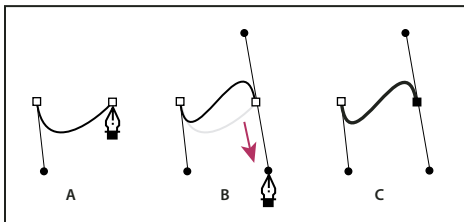
Drawing S curves
A. Starting to drag new smooth point B. Dragging in same direction as previous direction line, creating S-shaped curve C. Result after releasing mouse button

6 Continue dragging the Pen tool from different locations to create additional points.

7 Complete the path by doing one of the following:

• To close the path, position the Pen tool over the first anchor point. Click or drag to close the path.

• To leave the path open, Ctrl-click anywhere away from all objects or select the Selection tool.

Adjusting points and curves

The Titler includes tools for modifying existing paths. You can add or delete control points on a path. You can also move control points, and manipulate their direction lines to change the curve of adjacent line segments. And you can specify not only the path's thickness but also the shape of each of its ending points, or its caps, and its corners, or joins.

To add an anchor point to a path

1 Select the path.

2 Select the Add Anchor Point tool ♟₊.

3 Do one of the following:

• To add an anchor point without creating or manually adjusting a curve, click where you want to add an anchor point.

• To add an anchor point and simultaneously move the new point, drag the spot on the path where you want to add an anchor point.

To delete an anchor point

1 Select the path containing the anchor point.

2 Select the Delete Anchor Point tool 🖊⁻.

3 Click the point that you want to delete.

To adjust a control point

1 Select the path containing the control point.

2 Select the Pen tool 🖊.

3 Position the cursor over the point, and when the cursor becomes an arrow with a square next to it, drag the control point to adjust it.

To convert anchor points from one type to another

While drawing, you may find it necessary to change the type of anchor point you have created for a segment. Use the convert anchor point tool to do this.

1 Select the path you want to modify.

2 Select the Convert Anchor Point tool ⌐ and position the cursor over the anchor point that you want to convert.

3 Do one of the following:

• To convert a corner point to a smooth point, drag a direction point out of the corner point.

• To convert a smooth point to a corner point without direction lines, click the smooth point.

• To convert a corner point without direction lines to a corner point with independent direction lines, first drag a direction point out of a corner point (making it a smooth point with direction lines). Release the mouse button, and then drag either direction point.

• To convert a smooth point to a corner point with independent direction lines, drag either direction point.

Note: When you position the Pen tool over an anchor point, pressing the Alt key temporarily changes the Pen tool into the Convert Anchor Point tool.

To change the curve of a segment

1 Select the path you want to modify.

2 Select the Pen tool and drag a segment to change its curve.

Note: Dragging a segment changes the curve by adjusting the direction lines at each end of the segment by the same amount. This technique can change a straight segment into a curved one.

To set options for open and closed Bezier shapes

The Pen tool allows you to create open or closed paths. You can specify the thickness of the path, as well as the shape of path segment ends and corners.

❖ Select a line or an open or closed Bezier shape, and in the Title Properties panel, specify any of the following options:

Line Width Specifies the path width, in pixels.

Cap Type Specifies the type of cap placed at the end of the paths. The Butt option caps paths with square ends. The Round option caps paths with semicircular ends. The Square option caps paths with square ends that extend half the line width beyond the end of the line. This option makes the weight of the line extend equally in all directions around the line.

Join Type Specifies how the ends of adjoining path segments are joined. The Miter option joins path segments using pointed corners. The Round option joins path segments using rounded corners. The Bevel option joins path segments using squared corners.

Miter Limit Specifies the point at which the join type switches from mitered (pointed) to bevel (square). The default miter limit is 4, which means that the join type switches from miter to bevel when the length of the point is four times the stroke weight. A miter limit of 1 results in a bevel join.

Note: You can apply the options described above to shapes you create with the Pen tool or Line tool. You can apply an inner or outer stroke to any text or graphic object.

Adding images

You can use the Titler to place images in a title. This feature is particularly useful for adding a logo graphic to a title that will serve as a template. You can either add the image as a graphic element or place it in a text box to become part of the text. The Titler accepts both bitmap images and vector-based artwork (such as art created with Adobe Illustrator). However, Premiere Pro rasterizes vector-based art, converting it to a bitmap version in the Titler. By default, an inserted image appears at its original size. After you insert a logo in a title, you can modify the logo's properties (such as scale) just as you modify any object's properties. You can easily restore a logo's original size and aspect ratio.

See also

"About styles" on page 225

"To load a texture" on page 222

To place a logo in a title

1 Choose Title > Logo > Insert Logo.

2 Drag the logo to where you want it. If necessary, you can adjust the size, opacity, rotation, and scale of the logo.

Note: Insert a logo if you want the image to become part of the title file. If you want to use an image or moving video as a background only, superimpose the title over a clip of the image or video.

See also

"About transforming objects" on page 219

To place a logo in a text box

1 Using a type tool, click where you want to insert the logo.

2 Choose Title > Logo > Insert Logo Into Text.

To return a logo to its original size or aspect ratio

❖ Select the logo and choose either Title > Logo > Restore Logo Size or Title > Logo > Restore Logo Aspect Ratio.

Working with objects in titles

To change the stacking order of objects

When you create objects that overlap each other, you can control their stacking order in the Titler.

1 Select the object you want to move.

2 Choose Title > Arrange and then choose one of the following:

Bring To Front Brings the selected object to the top of the stacking order.

**Bring Forward** Switches the selected object with the object directly in front of it.

Send To Back Moves the selected object to the bottom of the stacking order.

Send Backward Switches the selected object with the object directly behind it.

Note: If your text or shape elements are densely stacked, it may be difficult to select an element within the stack. You can use the Title > Select command to navigate easily through the stacked elements to reach the target element.

Aligning and distributing objects

The Titler Actions panel includes buttons to arrange objects in the drawing area automatically. Use align buttons to line up objects; the center buttons to center objects in the drawing area; and the distribute buttons to space selected objects evenly. You can align, center, and distribute objects along horizontal or vertical axes.
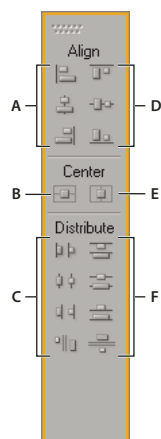
Titler Actions Panel
A. Horizontal alignment buttons B. Vertical centering button C. Horizontal distribution buttons D. Vertical alignment buttons
E. Horizontal centering button F. Vertical distribution buttons

When you align or distribute selected objects, keep the following in mind:

• An alignment option aligns selected objects to the object that most closely represents the new alignment. For example, for right alignment, all selected objects align to the selected object that is farthest to the right.

• A distribution option evenly spaces selected objects between the two most extreme objects. For example, for a vertical distribution option, the selected objects are distributed between the highest and lowest selected objects.

• When you distribute objects of different sizes, the spaces between objects may not be uniform. For example, distributing objects by their centers creates equal space between the centers—but different-sized objects extend by different amounts into the space between objects. To create uniform spacing between selected objects, use the Horizontal Even Spacing or Vertical Even Spacing option.

To center objects in titles

1 In the Titler, select one or more objects.

2 In the Titler Actions panel, click the button for the type of centering you want.

Note: You can center objects using the Title > Position command and selecting the option you want. Additionally, you can choose Title > Position > Lower Third to position the selected object along the bottom edge of the title-safe margin. To center an object both horizontally and vertically within the drawing area, you must click both centering buttons.

To align objects in titles

1 In the Titler, select two or more objects.

2 In the Titler Actions panel, click the button for the type of alignment you want.

To distribute objects in titles

1 In the Titler, select three or more objects.

2 In the Titler Actions panel, click the button for the type of distribution you want.

About transforming objects

Once you have created an object, you have full flexibility in adjusting its position, rotation, scale, and opacity—attributes collectively referred to as *transform properties*. To transform an object, you can drag in the drawing area, choose a command from the Title menu, or use controls in the Title Properties panel.

To adjust an object's opacity

1 Select an object or group of objects.

2 Do one of the following:

• In the Transform section of the Title Properties panel, adjust the Opacity value.

• Choose Title > Transform > Opacity, type a new Opacity value, and click OK.

Note: The opacity property setting adjusts the opacity of objects within a title. You can set the overall opacity of the entire title in the sequence as you would that of any video clip, using effects. See "Adjusting the opacity of clips" on page 357.

To adjust the position of objects

1 Select an object, or Shift-click to select multiple objects.

2 Do one of the following:

• In the drawing area, drag any of the selected objects to a new position.

• Choose Title > Transform > Position and type new X and Y Position values; then click OK.

• In the Transform section of the Title Properties panel, enter values for X Position and Y Position.

• Use the arrow keys to nudge the object in 1-pixel increments, or press Shift+arrow key to nudge the object in 5-pixel increments.

• Choose Title > Position and choose an option to center the selected object or align its bottom edge with the bottom of the title-safe margin.

To scale objects

1 Select an object, or Shift-click to select multiple objects.

2 Do one of the following:

• To scale the width, drag any object's left or right handles in the drawing area.

• To scale the height, drag the object's top or bottom handles in the drawing area.

• To constrain the object proportions, Shift-drag the corner and side handles.

• To scale and constrain the aspect ratio, Shift-drag any object's corner handles.

• To scale from the center, Alt-drag any object's corner handles.

• To set scale values in terms of percentages, choose Title > Transform > Scale, specify the values you want, and click OK.

• To set scale values in terms of pixels, specify values for Width and Height in the Title Properties panel.

Note: Dragging the handles of a text object created with the Horizontal Type or Vertical Type tool changes its font size. If the scaling is not uniform, the text's aspect value also changes.

To change the rotation angle of objects

1 Select an object, or Shift-click to select multiple objects.

2 Do one of the following:

• In the drawing area, place the cursor just outside any object's corner points. When the cursor becomes the Rotate icon ↰, drag in the direction you want to adjust the angle. Shift-drag to constrain the rotation to 45˚ increments.

• Select the rotation tool ⟳ and drag any object in the direction you want.

• Choose Title > Transform > Rotation, type a new Rotation value, and click OK.

• Enter a value for Rotation in the Title Properties panel, or expand the Rotation category heading and drag the angle control.

## To distort an object or multiple objects

1 Select the object, or Shift-click to select multiple objects.

2 In the Properties section of the Title Properties panel, click the triangle next to Distort to show its X and Y options. Adjust the X value to distort the text along the x axis. Adjust the Y value to distort along the y axis.

Note: Distort affects an entire graphic object's horizontal (X) or vertical (Y) aspect. However, it affects each character in a text object individually.

Adding color, fills, texture, strokes, and shadows

About object properties

With the Titler, you can apply custom properties to each object or group of objects you create. These properties include strokes, fills, sheens, textures, and shadows. You can save a combination of properties as a *style*. Styles appear as buttons in the Titler Styles panel, allowing you to apply favorite property combinations to objects easily. Using styles helps you maintain consistency across multiple titles in a project.
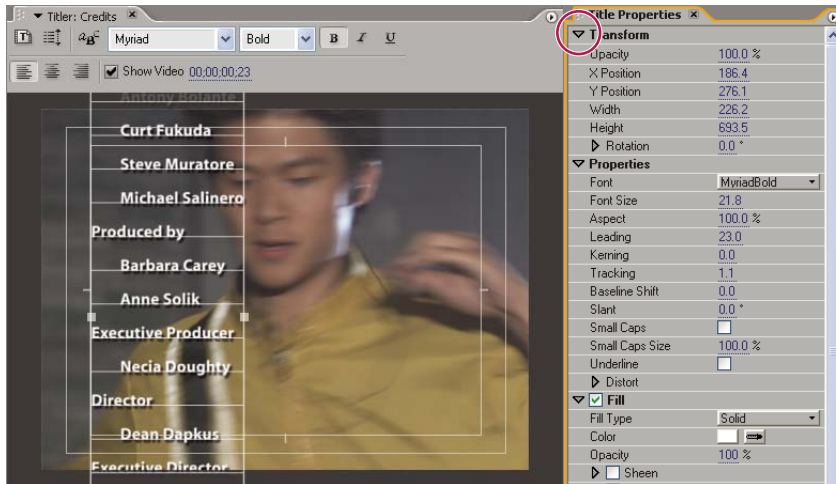
Title Properties panel

See also

"About styles" on page 225

To set an object's fill

An object's *fill* property defines the area within the contours of the object: the space inside a graphic object, or within the outline of each character of a text object. You an specify numerous options for a selected object's fill in the Title Properties panel.

Note: If you add a stroke to an object, the stroke also includes a fill (see "To add a stroke to an object" on page 224).

1 Select the object you want to fill.

2 In the Title Properties panel, click the triangle next to the Fill category and set any of the following options:

Fill Type Specifies whether and how color is applied within the contours of text or graphic object.

Color Determines the color of the fill. Click the color swatch to open a color picker, or click the eyedropper to sample a color from anywhere on the screen. Color options vary according to the Fill Type specified.

Opacity Specifies the fill's opacity, from 0% (completely transparent) to 100% (completely opaque).

Sheen Simulates a reflective surface, or sheen.

Texture Adds an image from a separate file. You can select the file you want to use as the texture source.

Set the opacity of an object's fill color to set the opacity of individual objects in a title. To set the opacity of the title as a whole, add it to a track in the Timeline above another clip and adjust its opacity as you would any clip's.

See also

"To add a stroke to an object" on page 224

Fill types

Solid Creates a fill of uniform color. Set options as desired.

Linear Gradient or Radial Gradient Choose Linear Gradient to create a linear, two-color gradient fill. Choose Radial Gradient to create a circular, two-color gradient fill.

The Color option specifies the beginning and ending gradient colors, which are displayed, respectively, in the left and right boxes, or *color stops*. Double-click a color stop to choose a color. Drag the color stops to adjust the transition smoothness between the colors.

The Color Stop Color option and the Color Stop Opacity option specify the color and opacity of the selected color stop. Click the triangle above the color stop you want to define and make adjustments as necessary. The Angle option (available for Linear Gradient only) specifies the angle of the gradient. The Repeat option specifies the number of times to repeat the gradient pattern.

4-Color Gradient Creates a gradient fill composed of four colors, with a color emanating from each of the object's corners.

The Color option specifies the color that emanates from each corner of the object. Double-click a color stop to choose a color. Drag the color stops to adjust the transition smoothness between the colors.

The Color Stop Color option and the Color Stop Opacity option specify the color and opacity of the selected color stop. Click the triangle above the color stop and make adjustments as necessary.

Bevel Adds a beveled edge to the background. Balance option specifies the percentage of the bevel that the shadow color occupies.

Eliminate Specifies that no fill or shadow is rendered.

Ghost Specifies that the shadow is rendered, but not the fill.

Eliminate and Ghost work best with objects that have shadows and strokes.

To add a sheen

You can add a sheen to any object's fill or stroke. A sheen resembles a streak of colored light across the surface of an object. You can adjust a sheen's color, size, angle, opacity, and position.

1 Select the object.

2 Select Sheen in the Title Properties panel.

3 Click the triangle next to Sheen and set its options.

Note: If the object's texture obscures the sheen, deselect the Texture option in the Title Properties panel.

To load a texture

You can map a texture to any object's fill or stroke. To add a texture, specify a vector or bitmap file (for example, an Adobe Photoshop file), or use one of several textures included with Adobe Premiere Pro.

1 Select the object.

2 In the Title Properties panel, select Texture for the object's fill or stroke, and click the triangle next to it to reveal the options.

3 Click the Texture swatch and select a file on the hard disk, or navigate to Program Files/Adobe/Premiere Pro/Presets/Textures to open a texture, and then click Open.

4 To specify how the texture scales, aligns, and blends with its associated object, set any of the remaining options:

Note: To remove a selected object's texture, deselect Texture in the Title Properties panel.

Flip With Object Flips the texture horizontally and vertically when the object is flipped (by dragging the control points over each other).

Rotate With Object Rotates the texture in sync with the object.

Scaling Object X, Scaling Object Y Specifies how the texture is stretched along the x or y axis when applied to the object. The Texture option doesn't stretch the texture but applies it to the face of the object from the upper left corner to the lower right corner. The Clipped Face option stretches the texture so that it fits the face, minus the area covered by any inner strokes. The Face option stretches the texture so that it fits the face exactly. The Extended Character option considers strokes when calculating the area over which the texture is stretched. For example, if you have a large, 20-pixel outer edge, the texture is stretched beyond the extents of the face. However, the texture is clipped to the face and only the extents are adjusted.

Scaling Horizontal, Scaling Vertical Stretches the texture to the specified percentage. A single value can produce different results depending upon other scaling choices you make. The range is from 1% to 500%; the default is 100%.

Scaling Tile X, Scaling Tile Y Tiles the texture. If the object is not tiled in a given direction, blank (alpha = 0) is used.

Alignment Object X, Alignment Object Y Specifies to which part of the object the texture aligns. Arbitrary aligns the texture to the title and not the object, letting you move the object without moving the texture. Clipped Face aligns the texture to the clipped area face (face minus the inner strokes). Face aligns the texture to the regular face and does not consider the strokes in the extent calculation. Extended Character aligns the texture to the extended face (face plus the outer strokes).

Alignment Rule X, Alignment Rule Y Aligns the texture to the top left, center, or bottom right of the object specified by Object X and Object Y.

X Offset, Y Offset Specifies the horizontal and vertical offsets (in pixels) for the texture from the calculated application point. This application point is calculated based on the Object X/Y and Rule X/Y settings. The range is –1000 to 1000, with a default of 0.

Blending Mix Specifies the ratio of texture to regular fill that is rendered. For example, if a rectangle is created and given a simple red-to-blue gradient, and then a texture is applied, the mix value determines how much of each is used when compositing the two to create the finished object. The control's range is –100 to 100. A value of –100 indicates that no texture is used and the gradient dominates. A value of 100 uses only the texture. A value of 0 uses both aspects of the object equally. The mix also plays a role in how the key of the ramp (set with the Fill Key option) and texture (set with the Texture Key option) are used.

Alpha Scale Readjusts the alpha value for the texture as a whole. This option allows you to easily make the object transparent. If the alpha channel is properly ranged, this option acts like a transparency slider.

Composite Rule Specifies which channel of an incoming texture is used to determine the transparency. In most cases, the alpha channel is used. However, if you use a black-and-red texture, you could impose transparency in the red areas by specifying the red channel

Invert Composite Inverts the incoming alpha values. Some textures may have the alpha range inverted. Try this option if the area that is supposed to appear solid is blank.

To add a stroke to an object

You can add an outline, or *stroke*, to your objects. You can add both inner strokes and outer strokes. Inner strokes are outlines along the inner edge of your objects, and outer strokes are outlines along the outer edge. You can add up to 12 strokes to each object. After you add the stroke, you can adjust its color, fill type, opacity, sheen, and texture. By default, strokes are listed and rendered in the order you create them; however, you can easily change that order.

1 Select the object.

2 In the Properties section of the Title Properties panel, expand the Strokes category.

3 Click Add next to either Inner Stroke or Outer Stroke.

4 Set any of the following options:

Type Specifies the type of stroke you apply. Depth creates a stroke that makes the object appear to extrude. Edge creates a stroke that encompasses the entire inner or outer edge of the object. Drop Face creates a copy of the object, which you can subsequently offset and apply values to.

Size Specifies the size of the stroke, in scan lines. This option is not available for the Drop Face stroke type.

Angle Specifies the offset angle of the stroke, in degrees. This option is not available for the Edge stroke type.

Magnitude Specifies the height of the stroke. This option is available only for the Drop Face stroke type.

Fill Type Specifies the type of fill for the stroke. All the fill types, including Sheen and Texture, work exactly like the Fill options.

Select and deselect stroke options to experiment with various combinations.

See also

"Fill types" on page 222

To change the listing order of strokes

1 Select an object containing multiple strokes.

2 In the Title Properties panel, select the stroke you want to move.

3 In the panel menu, choose Move Stroke Up to move the selected stroke one level up in the list, or choose Move Stroke Down to move the selected stroke one level down in the list.

To delete strokes from an object or text

1 Select an object containing one or more strokes.

2 In the Titler, do one of the following:

• To delete strokes from an object, select the object.

• To delete strokes from text, click the Text tool T , and then drag to select the text.

3 In the Title Properties panel, click the triangle next to Strokes to expand the category.

4 Expand Inner Strokes, Outer Strokes, or both.

5 Do one of the following:

• To delete a stroke, select either Inner Stroke or Outer Stroke.

- To delete multiple strokes, Ctrl-click each stroke (as designated by the heading "Inner Stroke" or "Outer Stroke") that you want to delete. You may select any combination of inner and outer strokes.

6 From the Title Properties panel menu, choose Delete Stroke.
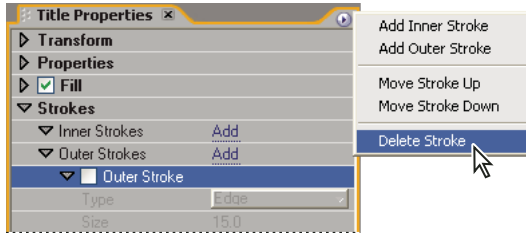
Selecting Delete Stroke from Title Properties panel menu

To create a drop shadow

Add drop shadows to any object you create in the Titler. The various shadow options give you full control over color, opacity, angle, distance, size, and spread.

1 Select an object.

2 In the Title Properties panel, select Shadow.

3 Click the arrow next to the Shadow option to set any of the following values:

Color Specifies the shadow color.

Opacity Specifies the shadow's level of transparency.

Angle Specifies the angle of the shadow in relation to the object.

Distance Specifies the number of pixels that the shadow is offset from the object.

Size Specifies the size of the shadow.

Spread Specifies how far the alpha channel boundaries of the object are extended prior to blurring. This is particularly useful on small, thin features such as cursive descenders or ascenders on typeface, which tend to disappear if you apply a significant blur.

Working with styles

About styles

Once you've applied a combination of color properties and font characteristics to a text or shape element in your title, you can save this combination, or *style*, for later use. You can save any number of styles. Thumbnails of all saved styles appear in the Titler Styles panel, so you can quickly apply your custom styles across projects. Adobe Premiere Pro also includes a set of default styles.

By default, Adobe Premiere Pro stores all saved styles as *style library* files that use the .prsl file extension. When you save a style library, you are saving the entire set of styles that are displayed in the current Adobe Title Designer window. The preset style library is stored in Program Files/Adobe/Premiere Pro 2.0/Presets/Styles; custom styles are stored in My Documents/Adobe/Premiere Pro/2.0/Styles.

Because Adobe Premiere Pro stores each style or set of styles as a separate file, you can share styles with other users. If you share styles, make sure that the fonts, textures, and background files used are available on all systems.

The Current Style thumbnail always shows the properties that you have applied to the currently selected element.
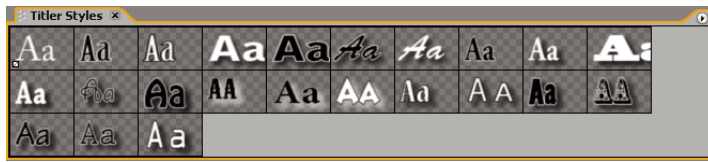
Titler Styles panel

To create a style

1 Select an object that has the properties you want to save as a style.

2 Do one of the following:

• From the Titler Styles panel menu, choose New Style.

• Right-click in the Titler Styles panel, and choose New Style.

3 Type a name for the style and click OK. Depending upon the display option you select, either a swatch displaying the new style or the new style name appears in the Titler Styles panel.

To modify the style swatch display

The Titler Styles panel displays the default style library as well as style swatches you create or load. The display defaults to show large swatches of sample text with the loaded style applied; however, you can choose to view your styles in small swatches or by the style name only.

❖ In the Titler Styles panel menu, choose one of the following:

Choose Text Only Displays only the style name.

Choose Small Thumbnails Displays only small swatches of sample text objects with the styles applied to them.

Choose Large Thumbnails Displays only large swatches of sample text objects with the styles applied to them.

To change the default characters in swatches

You can change the default characters that appear on the style swatches.

1 Choose Edit > Preferences > Titler.

2 In the Style Swatches box, type up to two characters that you would like to appear on the style swatches.

3 Click OK.

To apply a style to an object

1 Select the object to which you want to apply the style.

2 In the Titler Styles panel, click the style swatch that you want to apply.

To prevent the font type in the style from being applied to the font in your title, Alt-click the style swatch.

To delete, duplicate, rename, or set a default style

❖ In the Titler Styles panel, do any of the following:

• To delete a style, select it, and then choose Delete Style from the Titler Styles menu.

Note: This procedure deletes only the swatch or name from the display area. The style remains in the library. Use the Load Style Library, Reset Style Library, or Replace Style Library command to display the style library again.

- To duplicate a style, select it, and choose Duplicate Style from the Titler Styles menu. A duplicate of the selected style appears in the Titler Styles panel.

- To rename a style, select it, and choose Rename Style from the Titler Styles menu. Type a new name, up to 32 characters, in the Rename Style dialog box, and click OK. Names containing more than 32 characters are truncated.

- To set a default style, select the style and choose Set Style As Default from the Titler Styles menu. The Titler applies this style to each object you create from this point.

To manage style libraries

After you create a style, you may want to save it in a collection, or *style library*, with other styles. By default, the styles you create appear in the current style library, but you can create new libraries in which to save styles. For example, you can delete the current library display, create new styles as you work, and then save those styles in their own library.

❖ In the Titler Styles panel, do any of the following:

- To restore the default style libraries, choose Reset Style Library from the Styles menu.

- To save a style library, choose Save Style Library from the Styles menu. All styles visible in the Styles section are saved. Specify a name and location for the style library file and click Save. Adobe Premiere Pro saves style library files with the extension .prsl.

- To load a saved style library, locate it and click Open.

- To replace a style library, choose Replace Style Library from the Styles menu. Locate the style library that you want to use as a replacement and click Open.

Rolling and crawling titles

Creating rolls and crawls

Though static titles, graphics, and logos may suffice for some projects, many others require titles that move across the footage. (Titles that move vertically over the footage are called *rolls*. Titles that move horizontally are called *crawls*.) You use the Titler to create smooth, expert rolls and crawls.

Note: The length of the title in the Timeline panel determines the speed of the roll or crawl. The more you increase the title clip length, the slower the movement.
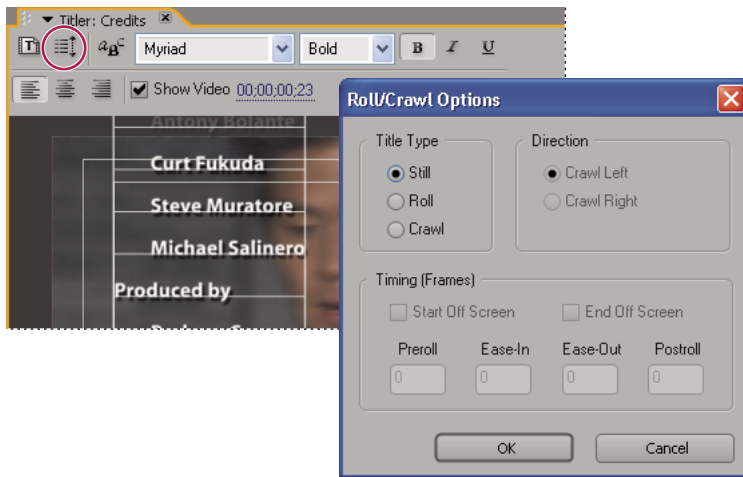
Setting title to roll

To create a rolling or crawling title

1 Do one of the following:

• To create a rolling title, choose Title > New Title > Default Roll.

• To create a crawling title, choose Title > New Title > Default Crawl.

2 Create the text and graphic objects for the rolling or crawling title. Use the Titler panel scroll bar to view offscreen areas of the title. When the title is added to the sequence, the offscreen areas roll or crawl into view.

💡 *For rolling credits, create a long text box using the Area Type tool, and use alignment, tabs, and leading to adjust the formatting.*

3 In the Titler panel, click the Roll/Crawl Options button ▤↕.

4 Specify the appropriate Direction and Timing options, and then click OK.

Note: You can specify a direction for crawling titles only.

To convert a title from one type to another

1 Open or select the title you want to convert in the Titler panel and then click the Roll/Crawl options button.

2 In the Titler Panel, click the Roll/Crawl options button.

3 For Title Type, specify the kind of title you want, and if necessary, specify Direction and Timing options. See "Roll/Crawl Timing options" on page 229.

4 Modify or create objects and save the title.

Roll/Crawl Timing options

Start Off Screen Specifies that the roll begins out of view and scrolls into view.

End Off Screen Specifies that the roll continues until the objects are out of view.

Pre-Roll Specifies the number of frames that play before the roll begins.

Ease-In Specifies the number of frames through which the title rolls at a slowly increasing speed until the title reaches the playback speed.

Ease-Out Specifies the number of frames through which the title scrolls at a slowly decreasing speed until the roll completes.

Post-Roll Specifies the number of frames that play after the roll completes.

Crawl Left, Crawl Right Specifies the direction in which the crawl moves.

See also

"To type horizontal or vertical text in a text box" on page 208

"Using tabs" on page 211

Chapter 12: Animation

Animating effects

About keyframes

Keyframes are used to create and control animation, effects, audio properties, and many other kinds of change that occur over time. A keyframe marks the point in time where you specify a value, such as spatial position, opacity, or audio volume. Values between keyframes are *interpolated*. When you use keyframes to create a change over time, you must use at least two keyframes—one for the state at the beginning of the change, and one for the new state at the end of the change.

Working with keyframes

When you use keyframes to animate the Opacity effect, you can view and edit the keyframes in either the Effect Controls or the Timeline panel. Sometimes, the Timeline panel alternative can be more appropriate for quickly viewing and adjusting keyframes. The following guidelines may indicate the appropriate panel for the task at hand:

- Editing keyframes in the Timeline panel works best for effects that have a single, one-dimensional value, such as opacity or audio volume. The Effect Controls panel is usually easier for editing keyframes of effects that have multiple, angular, or two-dimensional values, such as Levels, Rotation, or Scale, respectively.

- In the Timeline panel, variations in keyframe values are indicated graphically, so you can see at a glance how keyframe values change over time. By default, values change between keyframes in a linear manner, but you can apply options that refine the rate of change between keyframes. For example, you can bring motion to a gradual stop. You can also change the interpolation method and use Bezier controls to fine-tune the speed and smoothness of an effect's animation.

- The Effect Controls panel can display the keyframes of multiple properties at once, but only for the clip selected in the Timeline panel. The Timeline panel can display the keyframes for multiple tracks or clips at once but can display the keyframes of only one property per track or clip.

- Like the Timeline panel, the Effect Controls panel also displays keyframes graphically. Once keyframing is activated for an effect property, you can display the Value and Velocity graphs. The Value graph displays keyframes with changes in an effect's property values. The Velocity graph displays keyframes with handles for adjusting the speed and smoothness of the value changes from keyframe to keyframe.

- Keyframes for audio track effects can be edited only in the Timeline panel or in the Audio Mixer. Keyframes for audio clip effects are like keyframes for video clip effects; they can be edited in the Timeline panel or in the Effect Controls panel.

You can modify the panel arrangement further and choose Window > Workspace > Save Workspace to save the modified configuration as your own workspace. Be sure to give your workspace a name in the Save Workspace dialog box before clicking the Save button.

See also

"To activate keyframing" on page 234

"About keyframes" on page 230

"Automating audio changes in the Audio Mixer" on page 199

Viewing keyframes and graphs

You can view any keyframe in the keyframe area of the Effect Controls panel. In the Timeline panel, you can see keyframes by expanding the track and choosing the appropriate track viewing options. In the Effect Controls panel, any effect containing keyframed properties displays Summary Keyframe icons 🔲 when the effect is collapsed. *Summary keyframes* appear across from the effect's heading and correspond to all the individual property keyframes contained in the effect. You cannot manipulate summary keyframes; they appear for your reference only.

Both the Effect Controls and the Timeline panels let you adjust the timing and values of keyframes, but each works in a different way. Whereas the Effect Controls panel displays all effect properties, keyframes, and interpolation methods at once, clips in the Timeline panel can show only one effect property at a time. In the Effect Controls panel, you have complete control over keyframe values. In the Timeline panel, you have limited control (for example, you can't change values that use x, y coordinates, such as Position), however, you can make keyframe adjustments while editing without moving to the Effect Controls panel.

The graphs in the Timeline and Effect Controls panels display the values of each keyframe and the interpolated values between keyframes. When the graph of an effect property is level, the value of the property is unchanged between keyframes. When the graph goes up or down, the value of a property increases or decreases between keyframes. You can change the interpolation method and adjust Bezier curves in a graph to affect the speed and smoothness of the property changes from one keyframe to the next.

See also

"Working with keyframes" on page 230

"To edit keyframe graphs in the Effect Controls panel" on page 238

"About keyframes" on page 230

To view keyframes in the Effect Controls panel

If you've added keyframes to a sequence clip, you can view them in the Effect Controls panel.

1 Select a clip in the Timeline panel.

2 In the Effect Controls panel, click the triangle to expand the effect you want to view. The keyframes display in the Effect Controls timeline.

3 (Optional) If you want to view the Value and Velocity graphs of an effect property's settings, click the triangle next to the Toggle Animation icon 🕖 to expand an effect property.
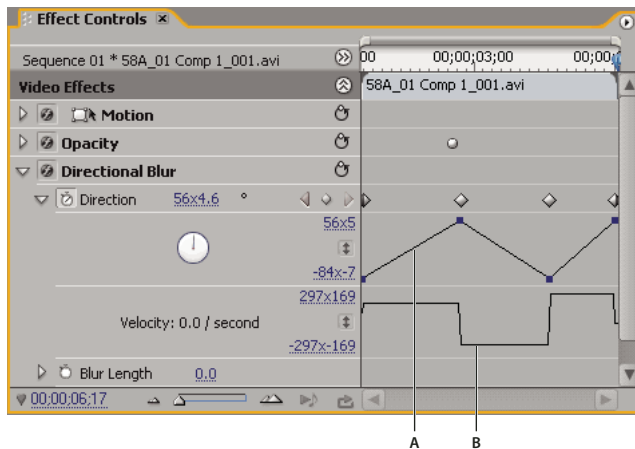
Effect Controls
A. *Value graph* **B.** *Velocity graph*

See also

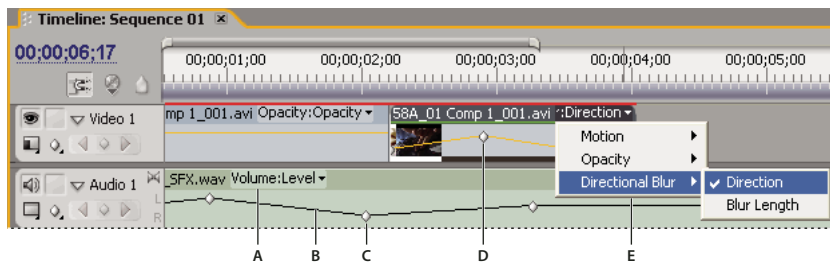## Displaying keyframes in the Timeline panel

By default, keyframes in the Timeline panel are hidden. For video and audio effects, the Timeline panel can display the keyframes specific to each clip. For audio effects, the Timeline panel can also display the keyframes for an entire track. Although each clip or track can display a different property, only one property's keyframes can be displayed at a time within an individual clip or track. You can specify which property's keyframes are currently displayed by choosing an option from the Show Keyframes pop-up menu. This pop-up menu is available for every clip or audio track in the Timeline panel.
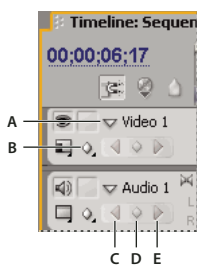
Track keyframe controls in Timeline panel
A. *Collapse/Expand Track triangle* **B.** *Show Keyframes (video)* **C.** *Previous Keyframe button* **D.** *Add Keyframe button* **E.** *Next Keyframe button*

The segments connecting keyframes form a graph that indicates changes in keyframe values along the duration of the clip or track. Adjusting keyframes and segments changes the shape of the graph.

Track keyframe controls in Timeline panel
A. Track effect properties B. Keyframe graph C. Audio track keyframes D. Video clip keyframes E. Clip effect properties

Adobe Premiere Pro provides a tool tip display of a keyframe's location, as well as the property and options you set for it in the Effect Controls panel. This information is useful for making precise keyframe placements, quickly noting the value you've set for a keyframe, and quickly comparing the location and change in value of two or more keyframes.
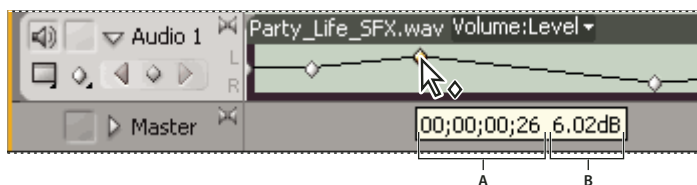
Keyframe tool tip
A. Timecode B. Property value

See also

"About keyframes" on page 230

To view keyframes and properties in the Timeline panel

If you've added keyframes to animate an effect, you can view them and their properties in the Timeline panel.

1 (Optional) If the track is collapsed, click the triangle to the left of the track name to expand it.

2 For a video track, click the Show Keyframes icon and choose any of the following from the menu:

Show Keyframes Displays the graph and keyframes of any video effect applied to clips in the track. An effect menu appears next to the clip name so you can choose the effect you want to view.

Show Opacity Handles Displays the graph and keyframes of the Opacity effect for each clips in the track.

Hide Keyframes Hides the graphs and keyframes for all clips in the track.

3 For an audio track, click the Show Keyframes button and choose any of the following from the menu:

Show Clip Keyframes Displays the graph and keyframes of any audio effect applied to clips in the track. An effect menu appears next to the clip name so you can choose the effect you want to view.

Show Clip Volume Displays the graph and keyframes of the Volume effect for each clips in the track.

Show Track Keyframes Displays the graph and keyframes of any audio effect applied to the entire track. An effect menu appears at the beginning of the track so you can choose the effect you want to view.

Show Track Volume Displays the graph and keyframes of the Volume effect applied to the entire track.

Hide Keyframes Hides the graphs and keyframes for all clips in the track.

4 (Optional) Use the Zoom In control to magnify the clip so that the effect pop-up menu appears at the top of the track in the Timeline panel. You can also drag the boundaries above and below the track name to increase the track height.
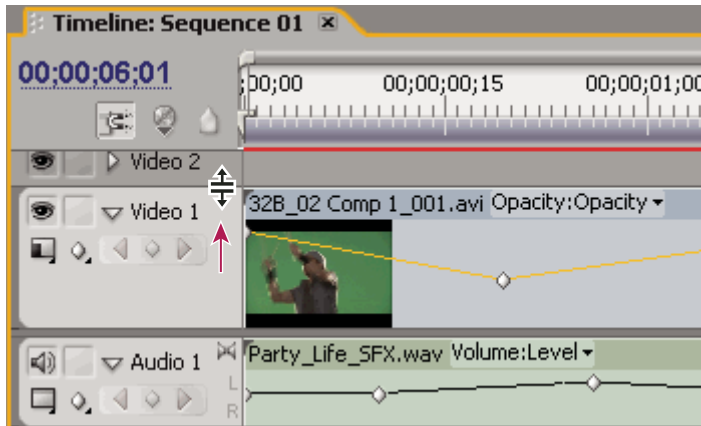
Dragging to increase the height of a track

5 (Optional) If you chose Show Keyframes, Show Clip Keyframes, or Show Track Keyframes in steps 2 and 3, click the effect menu and choose the effect that contains keyframes.
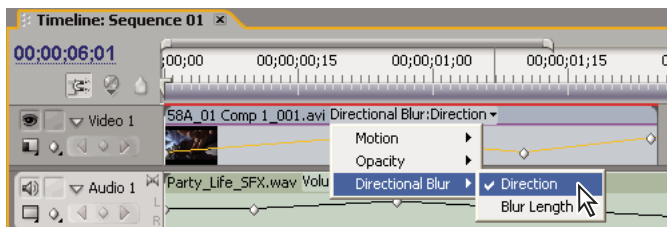
Choosing from the effects pop-up menu

6 Place the pointer directly over a keyframe to view its property in a tool tip.

See also

"About keyframes" on page 230

Activating and selecting keyframes

To activate keyframing

To animate an effect property, you must activate keyframing for that property in the Effect Controls panel. Once keyframes are activated, you can add and adjust as many keyframes as you need for animating the effect's property.
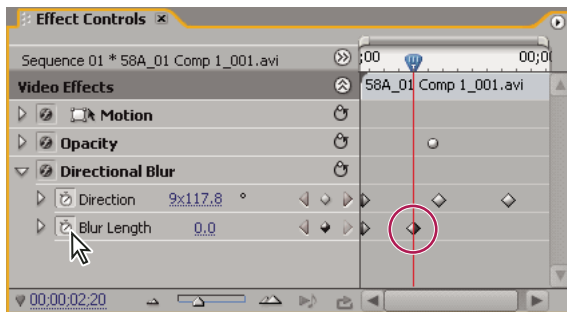
Clicking the Toggle Animation button activates keyframing for an effect property at the current time.

1 Make sure you have a sequence with clips in the Timeline panel. By default, the Fixed effects (Motion, Opacity, and Volume) are applied to clips in the video and audio tracks.

2 (Optional) Add Standard effects to clips.

3 Do any of the following:

• In the Effect Controls panel, first select the clip in the Timeline panel that contains the effect you want to animate, and then in the Effect Controls panel, click the triangle to expand the controls of the effect you want to animate.

• In the Timeline panel, click the Show Keyframes icon ◍ and choose any option from the menu except Hide Keyframes. The Add/Delete Keyframes button is activated for keyframing. You can immediately start adding and adjusting keyframes only for Fixed Effects in the Timeline panel. Keyframing for Standard effects must be first activated in the Effect Controls panel.

4 In the Effect Controls panel, click the triangle next to the effect property you want to animate.

5 Click the Toggle Animation button ⧖ next to the property name. A keyframe appears at the current time. Keyframing is now activated for an effect's property.

See also

"To apply an effect to a clip" on page 253

"To view keyframes and properties in the Timeline panel" on page 233

"About Standard effects" on page 251

"About Fixed effects" on page 250

To move the current-time indicator to a keyframe

Both the Effect Controls and the Timeline panels have *keyframe navigators*, which have left and right arrow to move the current-time indicator from one keyframe to the next. In the Timeline panel, the keyframe navigator is enabled after you activate keyframes for an effect property.

❖ Do any of the following:

• In the Timeline or Effect Controls panel, click a keyframe navigator arrow. The left-pointing arrow moves the current-time indicator to the previous keyframe. The right-pointing arrow moves the current-time indicator to the next keyframe.

• (Effect Controls panel only) Shift-drag the current-time indicator to snap to a keyframe.
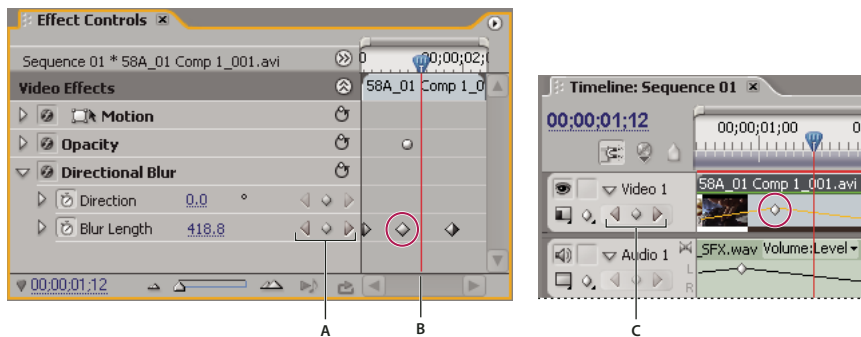
Keyframe navigator
A. *Keyframe navigator in Effect Controls panel* **B.** *Current-time indicator* **C.** *Keyframe navigator in Timeline panel*

To select keyframes

If you want to modify or copy a keyframe, first select it. Unselected keyframes appear hollow; selected keyframes appear solid. You don't need to select segments between keyframes because you can drag segments directly. Also, segments automatically adjust when you change the keyframes that define their end points.

❖ Do any of the following:

• To select a keyframe, use the Selection or the Pen tool to click the Keyframe icon.

• To select multiple keyframes, Shift-click with the Selection tool or the Pen tool to select multiple contiguous or noncontiguous keyframes.

Note: *When you position the Selection or Pen tool over a keyframe, the pointer appears with a Keyframe icon* 🖉 .

• To select multiple keyframes by dragging a selection, use the Pen tool to drag a marquee around the keyframes to select contiguous keyframes. Shift-drag to add more keyframes to an existing selection.

💡 *In the Effect Controls panel only, you can also use the Selection tool to drag and select multiple keyframes.*

• To select all keyframes for a property in the Effect Controls panel, click the layer property name. For example, click Position to select all the Position keyframes for a layer.

Adding and setting keyframes

To add keyframes for animating

You can add keyframes in the Timeline or the Effect Controls panel at the current time. Use the Toggle Animation button in the Effect Controls panel to activate the keyframing process. Keyframe display must be enabled for a track or clip before you can view or add keyframes in the Timeline panel.

1 In the Timeline panel, select the clip that contains the effect you want to animate.

2 If you want to add and adjust keyframes in the Timeline panel, make keyframes visible for the video or audio track.

Note: *If you are adding keyframes to a Fixed effect (Motion, Opacity, or Volume) in the Timeline panel, you can skip step 3.*

3 In the Effect Controls panel, click the triangle to expand the effect that you want to add keyframes to, and then click the Toggle Animation icon ⏱ to activate keyframes for an effect property.

4 Do one of the following to display the effect property's graph:

• (Effect Controls panel) Click the triangle to expand the effect property and display its Value and Velocity graphs.

• (Timeline panel) Choose the effect property from the effect pop-up menu next to the clip or track name.

5 Move the current-time indicator to the point in time where you want to add a keyframe.

6 Do any of the following:

• Click the Add/Remove Keyframe button and then adjust the effect property's value.

• Ctrl-click a keyframe graph using the Selection or Pen tool, and then adjust the effect property's value. You can add a keyframe anywhere on a graph using the Selection or Pen tool. It's not necessary to position the current-time indicator.

• (Effect Controls panel only) Adjust the controls for an effect's property. This automatically creates a keyframe at the current time.

7 Repeat steps 5 and 6 as needed to add keyframes and adjust the effect property.

💡 *Use the keyframe navigator arrow* ◁ ▷ *to navigate to an existing keyframe if you want to make further adjustments.*

See also

"Displaying keyframes in the Timeline panel" on page 232

"To adjust or reset controls in the Effect Controls panel" on page 257

"To apply an effect to a clip" on page 253

To delete keyframes

If you no longer need a keyframe, you can easily delete it from an effect property in either the Effect Controls or the Timeline panel. You can remove all keyframes at once or deactivate keyframes for the effect property. In the Effect Controls, when you deactivate keyframes with the Toggle Animation button, existing keyframes are deleted and no new keyframes can be created until you reactivate keyframes.

1 Make sure that the effect property's graphs are visible in the Effect Controls panel or Timeline panel.

2 Do one of the following:

• Select one or more keyframes and choose Edit > Clear. You can also press Delete.

• Navigate the current-time indicator to the keyframe and click the Add/Remove Keyframe button.

• (Effect Controls panel only) To delete all keyframes for an effect property, click the Toggle Animation button to the left of the name of the effect or property. When prompted to confirm your decision, click OK.

Note: When you deactivate the Toggle Animation button, keyframes for that property are permanently removed and the value of that property becomes the value at the current time. You cannot restore deleted keyframes by reactivating the Toggle Animation button. If you accidentally delete keyframes, choose Edit > Undo.

See also

"Displaying keyframes in the Timeline panel" on page 232

"To view keyframes in the Effect Controls panel" on page 231

"About keyframes" on page 230

To edit keyframe graphs in the Effect Controls panel

In the Effect Controls panel, you can make precise adjustments to keyframes for any effect property by editing their graphs. Once you activate keyframing for an effect's property, you can display the effect's Value and Velocity graphs. Value graphs provide information about the value of nonspatial keyframes (such as Scale) at any point in time. They also display and let you adjust the interpolation between keyframes. You can use the Velocity graph to fine-tune the speed of motion between keyframes.
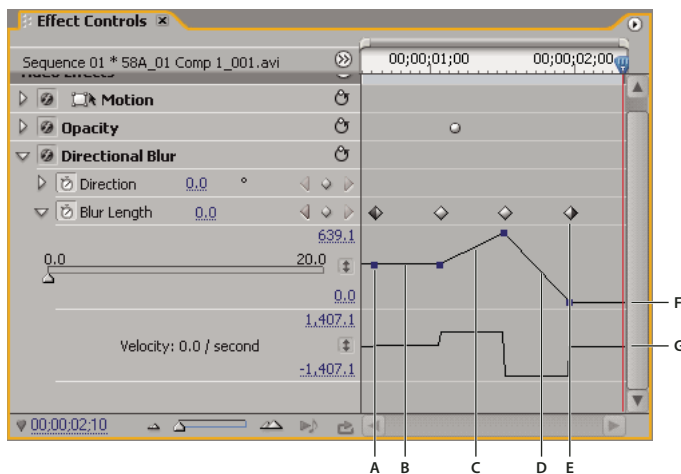
Effect property's value and velocity graphs
A. Keyframe marker B. Level graph indicating unchanged value C. Rising graph indicating increasing value D. Falling graph indicating decreasing value E. Keyframe F. Value graph G. Velocity graph

1 In the Timeline panel, select a clip containing an effect containing keyframes you want to adjust.

2 In the Effect Controls panel, click the triangle to expand the controls for the effect.

3   Click the triangle next to a property's name to display its Value and Velocity graphs.

Note: If no keyframes have been added, the graphs appear as flat lines.

4 (Optional) To better view a graph, hover the Selection or Pen tool over the boundary line below a graph until the pointer turns into a segment pointer ⬍, and then drag to increase the height of the graph area.

5 Use the Selection or Pen tool to drag a keyframe up or down on the Value graph, changing the effect property's value.

Note: In a Value or Velocity graph, you cannot move a keyframe left or right to change its current time. Instead, drag a keyframe marker above the graph using the Selection or Pen tool.

See also

"To add keyframes for animating" on page 236

Specifying keyframe values in the Timeline panel

You can use the Selection and Pen tools to edit keyframes in the Timeline panel. You increase or decrease values by dragging keyframes vertically. When working with keyframes graphically in the Timeline panel, be aware of how the values and units of specific properties are represented along the vertical axis of the time graph, as in the following examples:

- Opacity is measured from 0% at the bottom of the scale to 100% at the top of the scale, and the center of the graph is 50%.

- Rotation is measured in rotations and degrees, and the center of the graph represents no rotation (0˚). Clockwise rotation values are above the center, and counterclockwise values are below the center.

- Audio balance is measured from –100 to 100, with 0 at the center (neutral balance). Dragging above the center moves balance toward the left channel and sets a negative value, and dragging below the center moves balance toward the right channel and sets a positive value.

To edit keyframe graphs in the Timeline panel

1 Make sure the Timeline panel has at least one clip containing one or more effects with keyframes.

2 Make sure that the keyframes for the clip or track are visible.

3 In the effect menu that appears after the name of the clip or track, select the property you want to adjust. If you can't see the effect menu, try increasing the magnification of the Timeline panel.

4 Use the Selection or Pen tool to do one of the following:

- If you want to edit multiple or nonadjacent keyframes, select those keyframes.

- Position the Selection or Pen tool over a keyframe or keyframe segment. The Selection or Pen tool changes to the keyframe pointer ♦ or keyframe segment pointer ⬍.

5 Do any combination of the following:

- Drag a keyframe or segment up or down to change the value. As you drag, a tool tip indicates the current value. If no keyframes are present, dragging adjusts the value for the entire clip or track.

- Drag a keyframe left or right to change the time location of the keyframe. As you drag, a tool tip indicates the current time. If you move a keyframe onto another keyframe, the new keyframe replaces the old one.

See also

"To activate keyframing" on page 234

"To apply an effect to a clip" on page 253

"About the Timeline panel" on page 107

To optimize keyframe automation

Automating audio changes in the Audio Mixer can create more keyframes than necessary in the audio track, causing a degradation in performance. To avoid creating unnecessary keyframes, thereby ensuring both quality interpretation and minimal performance degradation, set the Automation Keyframe Optimization preference. In addition to the other benefits, you can edit individual keyframes much easier if they are assembled less densely in the track.

1 Choose Edit > Preferences > Audio.

2 In the Automation Keyframe Optimization area, select one or both of the following options, and then click OK:

Linear Keyframe Thinning Creates keyframes only at points that do not have a linear relationship to the start and end keyframes. For example, suppose you are automating a fade from 0 dB to –12 dB. With this option selected, Adobe Premiere Pro only creates keyframes at the points that represent an increase in value from the beginning (0 dB) and ending (–12 dB) keyframes. If you do not select this option, Adobe Premiere Pro may create several incremental keyframes of identical values between those two points, depending on the speed at which you change the value. This option is selected by default.

Minimum Time Interval Thinning Creates keyframes only at intervals larger than the value that you specify. Enter a value between 1 and 2000 milliseconds.

See also

"Automating audio changes in the Audio Mixer" on page 199

Moving and copying keyframes

To move keyframes

You can move any keyframe to a different point in time. When you move keyframes, you move the values and settings they contain. Moving keyframes makes it easy to change the speed of animations.

You can move selected keyframes over and past surrounding keyframes. In addition, you can drag them beyond the In and Out points of the clip, but they are constrained to the limits of the source media.

Note: The first keyframe always uses the Start Keyframe icon ◈ *and the last keyframe always uses the End Keyframe icon* ◈.

❖ Use the Selection or Pen tool to do one of the following:

• In the Timeline panel, select one or more keyframes and drag to the desired time.

• In the Effect Controls panel, select one or more keyframe markers and drag to the desired time.

Note: When you move more than one keyframe at one time, the selected keyframes maintain their relative distance.

To copy and paste keyframes in the Effect Controls panel

You can copy keyframes and paste them either to a new time in the clip's property or to the same effect property in a different clip. When you paste keyframes into another clip, they appear in the corresponding property in the target clip's effect. The earliest keyframe appears at the current time, and the other keyframes follow in relative order. If the target clip is shorter than the source clip, keyframes that occur after the target clip's Out point are pasted to the clip but don't appear unless you disable the Pin To Clip option. The keyframes remain selected after pasting, so you can immediately move them in the target clip.

1 In the Effect Controls panel, click the triangle to expand the effect to reveal its controls and keyframes.

2 Select one or more keyframes.

3 Choose Edit > Copy.

4 Do one of the following:

• Move the current-time indicator to where you want the first keyframe to appear and choose Edit > Paste.

• Select another clip, expand the appropriate property in the Effect Controls panel, move the current-time indicator to where you want the first keyframe to appear, and choose Edit > Paste.

You can also move a keyframe to a different time by dragging the keyframe.

See also

"To select keyframes" on page 236

"To view keyframes in the Effect Controls panel" on page 231

Copying and pasting keyframes in the Timeline panel

To quickly apply the same keyframe values at another point in time or in another clip or track, copy and paste the keyframes. When you paste, the earliest keyframe appears at the current time and the other keyframes follow in relative order. The keyframes remain selected after pasting, so you can fine-tune their location in the Timeline panel.

You can paste keyframes only to a clip or track that displays the same property as the copied keyframes. Also, Adobe Premiere Pro can paste keyframes at the current-time indicator on only one clip or track at a time. Because the current-time indicator can span multiple video and audio tracks, Adobe Premiere Pro uses criteria in the following order to determine where to paste the keyframes:

• If the current-time indicator is positioned within a selected clip, keyframes are pasted in that clip.

• If audio keyframes are cut or copied, Adobe Premiere Pro pastes in the first track where it finds a corresponding effect property, looking first at a sequence's audio tracks, then its submix tracks, and then the master track.

• If none of the above conditions produces a target video or audio track that matches both the effects property and the scope (clip or track) of the cut or copied keyframes, the Paste command is unavailable. For example, if you copy audio track keyframes but the targeted audio track displays clip keyframes, the keyframes can't be pasted.

To copy and paste keyframes in the Timeline panel

1 In the Timeline panel, choose from a clip or track's effect menu to display the property containing the keyframes you want to copy.

2 Select one or more keyframes.

3 Choose Edit > Copy.

4 In the timeline for the sequence containing the destination clip or track, do one of the following:

• Select the clip where you want to paste the keyframes.

• Target the video or audio track where you want the copied keyframes to appear.

5 Make sure that the clip or track displays the same property as the keyframes you copied; otherwise, the Paste command is unavailable. If the property is not available on the clip or track's effect properties pop-up menu, you must apply the same effect that was applied to the clip or track from which the keyframes were copied.

6 Move the current-time indicator to the point in time where you want the keyframes to appear.

7 Choose Edit > Paste.

See also

"To select keyframes" on page 236

Controlling effect changes using keyframe interpolation

About interpolation

Interpolation is the process of filling in the unknown data between two known values. In digital video and film, this usually means generating new values between two keyframes. For example, if you want a graphic element (such as a title) to move fifty pixels across the screen to the left, and you want it to do so in 15 frames, you'd set the position of the graphic in the first and 15th frames, and mark them both as keyframes. Then the software would complete the work of interpolating the frames in between to make the movement appear smooth. Because interpolation generates all the frames in between the two keyframes, interpolation is sometimes called *tweening*. Interpolation between keyframes can be used to animate movement, effects, audio levels, image adjustments, transparency, color changes, and many other visual and auditory elements.

The two most common types of interpolation are *linear interpolation* and *Bezier interpolation*.

Linear interpolation Creates an evenly-paced change from one keyframe to another, with each in-between frame given an equal share of the changed value. Changes created with linear interpolation start and stop abruptly and develop at a constant rate between each pair of keyframes.

Bezier interpolation Allows the rate of change to accelerate or decelerate based on the shape of a Bezier curve, such as gently picking up speed at the first keyframe and then slowly decelerating into the second.

To change a keyframe's interpolation method

By changing and adjusting keyframe interpolation, you gain precise control over the changes in your animations. You can either choose an interpolation type from a context menu or you can directly change one keyframe type to another by manually adjusting the keyframe or the handles.

Note: You can also use the Ease In and Ease Out commands to quickly adjust keyframe interpolation.
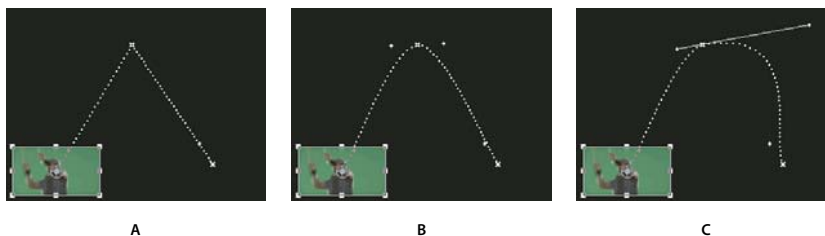
Changing keyframe interpolation
*A Linear spatial keyframe **B.** Auto Bezier interpolation **C.** Continuous Bezier interpolation*

1 Do one of the following:

• In the Effect Controls panel, right-click a keyframe marker.

• In the Timeline panel, right-click a keyframe.

2 Choose an interpolation method from the context menu:

Linear Creates a uniform rate of change between keyframes.

Bezier Lets you manually adjust the shape of the graph on either side of a keyframe. You can create very smooth changes using this method.

Auto Bezier Creates a smooth rate of change through a keyframe. As you change a keyframe's value, the Auto Bezier direction handles change to maintain a smooth transition between keyframes.

Continuous Bezier Creates a smooth rate of change through a keyframe. However, unlike the Auto Bezier interpolation method, Continuous Bezier lets you adjust direction handles manually. As you change the shape of a graph on one side of a keyframe, the shape on the other side of the keyframe changes to maintain a smooth transition.

Hold Changes a property value without gradual transition (sudden effect changes). The graph following a keyframe with the Hold interpolation applied appears as a horizontal straight line.

Ease In Slows down the value changes entering a keyframe.

Ease Out Gradually accelerates the value changes leaving a keyframe.

Note: Although interpolation methods can vary the rate at which a property changes between keyframes, they cannot change the actual duration between keyframes. Duration is determined by the time (or distance in the time ruler) between keyframes.
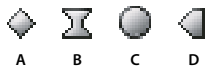
Keyframe interpolation methods
A. Normal In/Out B. Bezier/Continuous Bezier/Ease In/Ease Out C. Auto Bezier D. Hold

See also

"About interpolation" on page 242

Controlling change using Bezier keyframe interpolation

Bezier handles are two-directional controls that change the curve of the line segment between the handle and the next point on either side. The farther you pull a handle from its vertex (center point), the more it bends or curves. The curve that you create by dragging the Bezier handle determines how smoothly the effect and motion changes occur as the animation parameter enters and exits a keyframe. These handles offer you more control over animation changes than simply choosing a keyframe interpolation method. You can manipulate Bezier handles in either the Timeline panel, the Effect Controls panel, or the Program Monitor.

To create Bezier keyframes

1 In the Timeline panel, select the clip containing the keyframes you want to adjust, and then do one of the following:

• (Timeline panel) Choose the property you want to adjust from the effect pop-up menu next to the clip or track name. You adjust the temporal interpolation of a property in the Timeline panel. Select the clip in the Program Monitor if you want to change the spatial interpolation there.

• (Effect Controls panel) Select an effect property's keyframe markers for the keyframes you want to adjust.

2 Do one of the following to choose a keyframe interpolation method:

• (Timeline panel) Right-click the keyframe you want to adjust, and choose a keyframe interpolation method from the menu.

• (Effect Controls panel) Right-click the keyframe marker for the keyframe you want to adjust, and choose a keyframe interpolation method from the menu.

3 To manually change a keyframe from one type to another, do one of the following:

• If the keyframe uses Linear interpolation, Ctrl-click the keyframe in the Timeline panel or Ctrl-click the keyframe marker in the Effect Controls panel to change it to Auto Bezier. If you drag the handles, the keyframe changes to Continuous Bezier.

• If the keyframe uses Auto Bezier interpolation, Ctrl-click the keyframe and drag out a direction handle to change it to Bezier. Bezier interpolation lets you control each direction handle independently. To convert it to Continuous Bezier, just drag a handle.

• If the keyframe uses Bezier, Continuous Bezier, or Auto Bezier, Ctrl-click the keyframe to change it to Linear. The Bezier handles disappear.

See also

"About interpolation" on page 242

"To view keyframes in the Effect Controls panel" on page 231

"To view keyframes and properties in the Timeline panel" on page 233

To adjust Bezier handles

1 Display the Bezier keyframe you want to adjust.

2 Select either the Selection tool or the Pen tool 🖋, and do one of the following:

• To adjust the slope of the curve, drag the Bezier handle up or down. Moving the handle up accelerates the changes and moving the handle down decelerates the changes.

• To adjust the range of the curve's influence, drag the Bezier handle to the left or right.

To fine-tune the speed of an effect

In the Effect Controls panel, you can use the Velocity graph to adjust motion or the rate of change for a value just before and just after a keyframe. Such adjustments can simulate real-world motion. For example, you can change the motion of a clip so that it slows down just before a keyframe and then speeds up just after the keyframe. You can control the values approaching and leaving a keyframe together, or you can control each value separately.
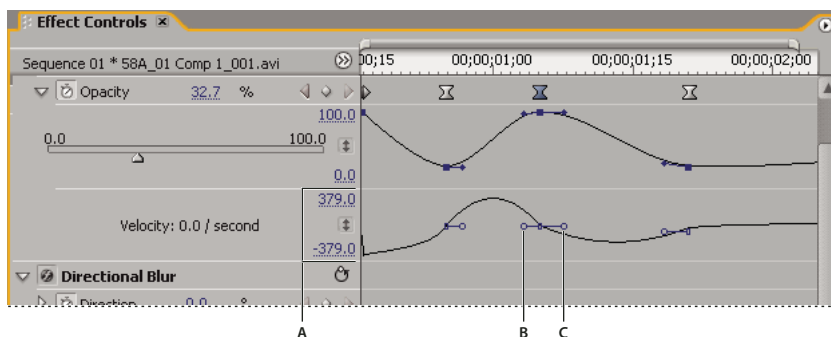
Velocity graph
A. Speed controls B. Incoming direction handles C. Outgoing direction handles

1 In the Effect Controls panel, click the triangle to expand the effect property with keyframes that you want to adjust.

Note: *If no keyframes have been added, the graphs appear as flat lines.*

2 In the Value graph, use the Selection or Pen tool to click the keyframe marker for the keyframe you want to adjust. This displays the direction handles and speed controls for the keyframe in the Velocity graph.

3 In the Velocity graph, use the Selection or Pen tool to do one of the following:

• To accelerate entering and leaving the keyframe, drag a direction handle up. Both the incoming and outgoing handles move together.

• To decelerate entering and leaving the keyframe, drag a direction handle down. Both the incoming and outgoing handles move together.

• To accelerate or decelerate entering the keyframe only, Ctrl-click the incoming direction handle and drag it up or down.

• To accelerate or decelerate leaving the keyframe only, Ctrl-click the outgoing direction handle and drag it up or down.

Note: To rejoin the incoming and outgoing handles, Ctrl-click them again.

• To increase or decrease the influence of a keyframe value on the previous keyframe, drag the incoming direction handle to the left or right.

• To increase or decrease the influence of a keyframe value on the next keyframe, drag the outgoing direction handle to the right or left.

Note: Influence determines how quickly the Velocity graph reaches the value you set at the keyframe, giving you an additional degree of control over the shape of the graph.

The values (to the left of the Velocity graph) change as you adjust the graph. These numbers represent the upper and lower values of the Velocity graph. You can also adjust the velocity by changing the numeric values.

See also

Motion effect

Animating clips with the Motion effect

Use the Motion effect to position, rotate, or scale a clip within the video frame. To animate clips, you must set keyframes for Motion properties.

By default, each clip that you add to the Timeline panel has the Motion effect applied. You can view and adjust the Motion effect properties in the Effect Controls panel by clicking the triangle next to the Motion name. Motion properties can be directly manipulated in the Program Monitor or using the controls in the Effect Controls panel.

By default, a clip appears at 100% of its original size in the center of the Program Monitor. Position, scale, and rotation values are calculated from the anchor point, which lies at the clip's center.

Note: Do not confuse the anchor point of a clip with anchor points created with the Pen tool in the Adobe Title Designer.

Because the Position, Scale, and Rotation properties are spatial in nature, it's best if they are adjusted directly in the Program Monitor. When you click the Transform icon ⬚↖ next to the Motion effect in the Effect Controls panel, handles appear on the clip in the Program Monitor that let you directly manipulate the clip and adjust the Motion effect properties. Although the anchor point also appears in the Program Monitor, it can be adjusted only in the Effect Controls panel. However, the Program Monitor updates any changes to the anchor point as you make them.
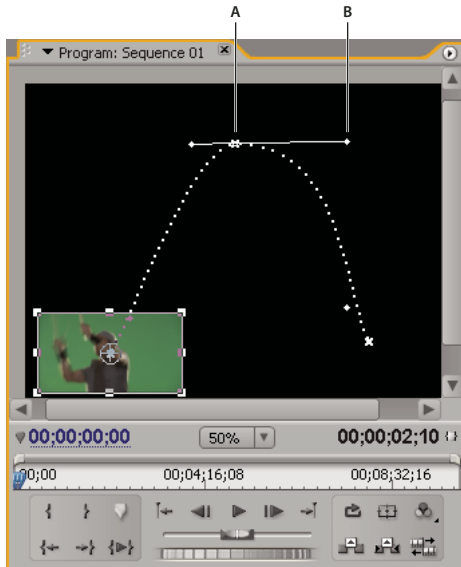
Program monitor
A. *Anchor point* *B.* *Handle*

💡 *Standard effects that allow direct manipulation of clips in the Program Monitor include Corner Pin, Crop, Garbage Matte, Lighting Effects, Mirror, Transform, and Twirl. This capability is indicated by the Transform icon ⬚↖ next to the effect name in the Effect Controls panel.*

See also

"To adjust position, scale, and rotation" on page 246

"About keyframes" on page 230

To adjust position, scale, and rotation

You can adjust the position, scale, and rotation of a clip and Lighting Effects lights by directly manipulating handles in the Program Monitor. You can also adjust the properties using the controls in the Effect Controls panel.

Note: Direct manipulation is also available for the following effects: Corner Pin, Crop, Garbage Matte, Mirror, Transform, and Twirl.

1 Select a clip in the Timeline panel.

2 Do one of the following:

• (Lighting Effects only) Apply the Lighting Effects to the clip and then click the Transform icon ⬚↖ next to Lighting Effects in the Effect Controls panel.

• (Motion effect only) Click the image in the Program Monitor or click the Transform icon next to Motion in the Effect Controls panel.

The handles and anchor point appear in the Program Monitor.

3 In the Program Monitor, do any of the following:

• To position a clip or lighting effect, click in the clip or effect outline and drag to reposition it. Don't drag a handle to reposition the clip or lighting effect.

• To scale freely, drag a corner handle.

• To scale one dimension only, drag a side (not a corner) handle.

• To scale proportionally, Shift-drag any handle.

Note: When using the Motion effect to scale a clip, scaling video and low-resolution images over 100% can make them look blocky or pixelated.

• To rotate a clip or effect, position the pointer slightly outside any of the handles, so that the pointer changes into the Rotate icon ↰ and drag. Shift-drag constrains the rotations to 45˚ increments. For the Motion effect, you can also drag in a circular motion until the clip rotates the number of times you want to create multiple rotations.

💡 *To animate the motion, scaling, or rotation over time, set keyframes as you manipulate the clip or effect in the Program Monitor.*

See also

"Animating motion in the Program Monitor" on page 247

Animating motion in the Program Monitor

You can create animations, insets, and split screens by manipulating a clip directly in the Program Monitor and setting keyframes for the Motion effect. By adjusting a clip's position and scale in the Program Monitor, you reveal clips in the tracks below it and can create interesting compositions.

When you animate a clip's position, the clip's motion is represented by a motion path in the Program Monitor. Small white Xs represent keyframed positions, dotted lines represent positions at interpolated frames, and the circular anchor point symbol represents the center of the clip at the current frame. The spacing between dots indicates the speed between keyframes: wide spacing shows fast motion, while tightly spaced dots show slower motion.
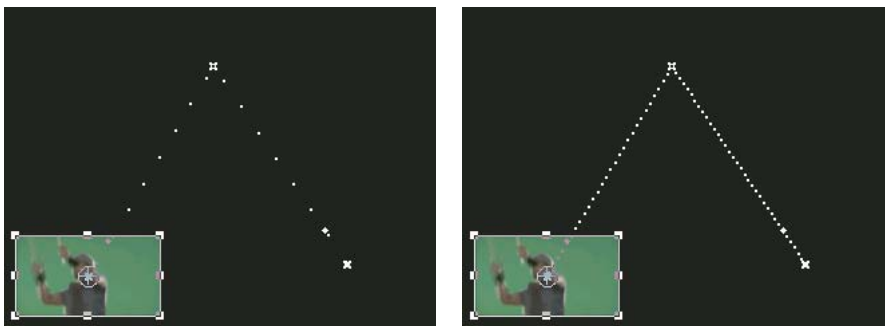
Clip in Program Monitor showing a motion path with fast motion (left) compared to slow motion (right)

💡 *To quickly apply Motion effect changes to a sequence clip, you can click the image in the Program Monitor and begin manipulation (without first clicking the Transform icon next to the Motion effect in the Effect Controls panel). If you adjust the position of the image, you can further refine its movement by using the Bezier keyframes.*

See also

"To adjust position, scale, and rotation" on page 246

"About interpolation" on page 242

"Controlling change using Bezier keyframe interpolation" on page 243

"About keyframes" on page 230

To animate a clip in the Program Monitor

When the Motion effect is selected in the Effect Controls panel, you can manipulate a clip in the Program Monitor. Create an animation by setting keyframes for one or more of the Motion effect's properties (for example, Position).

1 Select a clip in the Timeline panel.

2 Do one of the following:

• Select the Motion effect in the Effect Controls panel.

• Click the image in the Program Monitor.

• Click the Transform icon next to Motion in the Effect Controls panel.

Handles appear around the clip's perimeter in the Program Monitor.

Note: If you don't see the clip handles, change the Zoom Level in the Program Monitor to a smaller percentage so that the gray work area around the video frame appears.

3 Move the current-time indicator to the time where you want to start the animation—any frame between the clip's current In point to its Out point.

4 In the Effect Controls panel, expand the Motion effect and click the Toggle Animation button next to each property you want to define at that point in time. A Keyframe icon appears at the current-time indicator for that property.

5 In the Program Monitor, change the keyframe value by positioning the pointer near any of the clip's eight square handles to use any of the following pointer tools:

• The selection pointer to set the position value.

• The rotate pointer to set the rotation value.

• The scale pointer to set the scale value.

Note: If clips handles disappear, reselect the Motion effect in the Effect Controls panel.

6 Move the current-time indicator in either the Timeline or the Effect Controls panel to the time you want to define a new value for the property (and thereby a new keyframe).

7 Manipulate the clip in the Program Monitor to set a new value for each property for which you set keyframes in step 3. A new Keyframe icon appears in the Effect Controls panel at the current-time indicator.

8 Repeat steps 5 and 6 as needed.

When you animate a clip, it can be useful to reduce the Program Monitor's magnification level. This way, you can see more of the pasteboard area outside the visible area of the screen and can use it to position the clip off screen.

To change Position keyframes in a motion path

You can change the value of a Position keyframe, and thereby adjust your motion path, simply by dragging the Position keyframe (indicated by a white X) in the Program Monitor.

1 Select a clip that has Motion effect keyframes.

2 In the Effect Controls panel, click the Transform icon [icon] next to Motion. The clip's motion path appears in the Program Monitor.

3 Do any of the following:

• To move an existing keyframe, drag the keyframe handle in the Program Monitor.

• To create a new position keyframe, set the current time between existing keyframes and drag the image in the Program Monitor. A new keyframe appears in the timeline, the Effect Controls panel, and the Timeline panel.

Note: This procedure changes the position value at a keyframe. To change the timing of keyframes, move Keyframe icons in the Effect Controls panel.

• To adjust a Bezier handle, Ctrl-drag a keyframe's Bezier handle.

See also

"About interpolation" on page 242

"To animate a clip in the Program Monitor" on page 248

Chapter 13: Applying Effects

Working with effects

Working with effects

Adobe Premiere Pro includes a variety of audio and video effects that you can apply to clips in your video program. An effect can add a special visual or audio characteristic or provide an unusual feature attribute. For example, an effect can alter the exposure or color of footage, manipulate sound, distort images, or add artistic effects. You can also use effects to rotate and animate a clip or adjust its size and position within the frame. The intensity of an effect is determined by values that you control. The controls for all effects can also be animated using keyframes in the Effect Controls panel.

Adobe Premiere Pro has Fixed effects and Standard effects. Standard effects generally affect a clip's image quality and appearance, while Fixed effects adjust the clip's position, scale, movement, opacity, and audio volume. By default, Fixed effects are automatically applied to every clip in a sequence.

In Adobe Premiere Pro you can create and apply presets for all effects. You can animate effects using keyframes and view information about individual keyframes directly in the Timeline panel.

Note: Adobe Premiere Pro can process all effects at an 8-bit color depth in the RGB colorspace. Some effects can be processed at either 16-bit or 32-bit (floating point) depth and some in the YUV colorspace. Choose Project > Project Settings > Video Rendering and then select the Maximum Bit Depth option to have Adobe Premiere Pro process an effect at the highest possible quality. Keep in mind that this option uses lots of processing power.

See also

"Effect presets" on page 258

"About Fixed effects" on page 250

"About Standard effects" on page 251

"To edit keyframe graphs in the Effect Controls panel" on page 238

About Fixed effects

Every clip you add to the Timeline panel has Fixed effects preapplied, or built-in. Fixed effects control the inherent properties of a clip and appear in the Effect Controls panel whenever the clip is selected. You can adjust all of the Fixed effects in the Effect Controls panel; however, the Program Monitor, Timeline panel, and Audio Mixer also provide controls that may be easier to use. The Fixed effects include the following:

Motion Includes properties that allow you to animate, rotate, and scale your clips or composite them with other clips. (To adjust the Motion effect in the Program Monitor, see "To adjust position, scale, and rotation" on page 246 and "Animating motion in the Program Monitor" on page 247.)

Opacity Lets you to reduce the opacity of a clip for use in such effects as overlays, fades, and dissolves. (To adjust the Opacity effect in the Timeline panel, see "Adjusting the opacity of clips" on page 357.)

Volume Controls the volume for any clip that contains audio. (To adjust the Volume effect in the Timeline panel, Effect Controls panel, or Audio Mixer, see "To adjust the volume in the Timeline panel" on page 187, "To adjust the

volume in the Effect Controls panel" on page 188, and "To set a uniform track output level in the Audio Mixer" on page 188.)

Because Fixed effects are already built into each clip, you need only adjust their properties to activate them.

Adobe Premiere Pro renders Fixed effects after any Standard effects that are applied to the clip. Standard effects are rendered in the order in which they appear, from the top down. You can change the order of Standard effects by dragging them to a new position in the Effect Controls panel, but you can't move Fixed effects. If you want to change the render order of Fixed effects, use Standard effects instead: Use the Transform effect in place of the Motion effect, the Alpha Adjust effect in place of the Opacity effect, and the Volume effect in place of the fixed Volume effect. While these effects aren't identical to the Fixed effects, their parameters are equivalent.

About Standard effects

Standard effects are additional effects that you must first apply to a clip to create a desired result. You can apply any number or combination of Standard effects to any clip in a sequence. Use Standard effects to add special characteristics or to edit your video, such as adjusting tone or trimming pixels. Adobe Premiere Pro includes many video and audio effects, which are located in the Effects panel. Standard effects must be applied to a clip and then adjusted in the Effect Controls panel. Certain video effects allow direct manipulation using handles in the Program Monitor. All Standard effect properties can be animated over time using keyframing and changing the shape of the graphs in the Effect Controls panel. The smoothness or speed of the effect animation can be fine-tuned by adjusting the shape of Bezier curves in the Effect Controls panel.

Note: The effects listed in the Effects panel depend on the actual effect files in Adobe Premiere Pro's Plug-ins folder. You can expand the repertoire of effects by adding compatible Adobe plug-in files or plug-in packages available through other third-party developers.

See also

"To apply an effect to a clip" on page 253

About clip-based and track-based effects

All video effects—both Fixed and Standard effects—are clip-based. That is, they alter individual clips. Since all clips include Fixed effects, you only need to apply Standard effects to a clip to create a result. You can apply a clip-based effect to more than one clip at a time by creating a nested sequence.

Audio effects can be applied to either clips or to tracks. To apply *track-based* effects, use the Audio Mixer. If you add keyframes to the effect, you can then adjust the effect either in the Audio Mixer or the Timeline panel.

See also

"About the Timeline panel" on page 107

Using effects from other products

In addition to the dozens of effects included with Adobe Premiere Pro, many effects are available in the form of plug-ins, which you can purchase from Adobe or third-party vendors, or acquire from other compatible applications. For example, many Adobe After Effects plug-ins can be copied into the Adobe Premiere Pro Plug-ins folder to use in your video work. However, Adobe supports only plug-ins that are installed with the application.

Any effect is available to Adobe Premiere Pro when its plug-in file is present in the Plug-ins folder, which is in the Adobe Premiere Pro folder by default. If you purchased additional effects, purchased Adobe Premiere Pro as part of a hardware package, or removed files from the Plug-ins folder, you may have a different set of effects than those described in Adobe Premiere Pro Help.

You can find a complete list of third-party plug-in vendors on the Adobe web site.

Note: If you use effects not included with Adobe Premiere Pro and you want to open your project on another Adobe Premiere Pro system, you must install the same effects on that system. When you open a project with references to missing effects, Adobe Premiere Pro removes the corresponding effects from the project.

About GPU-accelerated effects

If you have a GPU (Graphics Processing Unit) card that supports Direct3D, PS 1.3+, and VS 1.1+, you can use three additional effects that take advantage of the video-processing capabilities of GPU cards and of 3D shading: Page Curl, Refraction, and Ripple (Circular). These effects reside in the GPU Effects bin in the Effects panel.

Note: Not all effect options may be available if your graphics card doesn't have Pixel Shader 2.0 and Vertex Shader 2.0.

See also

"Page Curl effect" on page 312

"Refraction effect" on page 312

"Ripple (Circular) effect" on page 312

Working with discontinued effects

You can open, view, and render projects from Adobe Premiere 6.5 and 6.0 that contain effects not included with Adobe Premiere Pro. Newer effects have replaced most of the older effects and contain comparable, if not improved, features. Adobe Premiere Pro retains all discontinued effects for compatibility with older projects; however, you cannot reapply them.

Note: Adobe Premiere Pro does not support Adobe Premiere 5.0 effects and removes these if you open an Adobe Premiere 6.0 project file that contains them.

Applying, removing, and organizing effects

Using the Effects panel

Standard effects are listed in the Effects panel and are organized into two main bins, Video Effects and Audio Effects. Within each bin, effects are grouped by type in nested bins. For example, the Blur and Sharpen bin contains effects that defocus an image, such as Gaussian Blur and Directional Blur. Audio effects are also grouped by the type of audio clips they support: mono, stereo, or 5.1. You can also locate an effect by typing the effect name in the Contains text box. You can add bins to contain your favorite or most frequently used effects.

To open the Effects panel, choose Window > Effects, or click the Effects tab
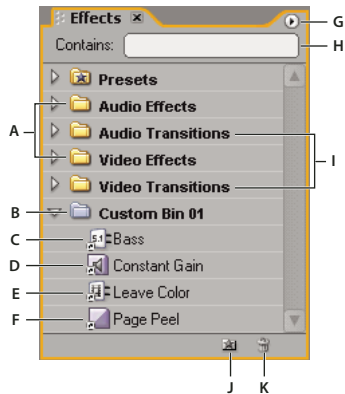
Effects panel
A. Effects bins B. Custom bin C. Audio effect D. Audio transition E. Video effect F. Video transition G. Effects panel menu H. Search text box I. Transitions bins J. New Custom bin K. Delete Custom Item

To create bins of favorite effects

1 In the Effects panel, click the New Custom Bin button ![icon] , or choose New Custom Bin from the Effects panel menu. A new Custom bin appears in the Effects panel. You can rename it.

2 Drag effects to the Custom bin. A copy of the effect is listed in the Custom bin. You can create additional Custom bins, which are numbered.

3 To rename the custom bin, double-click the existing name and type the new name.

To remove a Custom bin

❖ In the Effects panel, select a Custom bin, and click the Delete Custom Items button ![icon] or choose Delete Custom Items from the Effects panel menu.

Note: You can remove Custom bins only from the Effects panel.

To apply an effect to a clip

You can apply a Standard effect to a clip by simply dragging an effect's icon from the Effects panel to a clip in the Timeline panel or by dragging the effect icon to the Effect Controls panel if the clip is selected. You can even apply the same effect multiple times, using different settings each time. Alternatively, you can view and adjust a clip's effects in the Timeline panel by expanding its track and selecting the proper viewing options. You can also temporarily disable any effect, which suppresses the effect without removing it, or you can remove the effect completely. To view and adjust a selected clip's effects, use the Effect Controls panel.

By default, when you apply an effect to a clip, the effect is active for the duration of the clip. However, you can make an effect start and stop at specific times or make the effect more or less intense by using keyframes.

1 In the Effects panel, do one of the following to select an effect:

• Expand the Video Effects bin to locate the desired video effect.

• Expand the Audio Effects bin to locate the desired audio effect.

• Type the name of the effect you want in the Contains text box.

2 Drag the effect to a clip in the Timeline panel. To apply an audio effect, drag the effect to an audio clip or the audio portion of a video clip.

You cannot apply audio effects to a clip when Show Track Volume or Show Track Keyframes is enabled for the Audio track.

If the clip is selected in the Timeline panel and the Effect Controls panel is open, you can drag the effect directly to the Effect Controls panel.

3 In the Effect Controls panel, click the triangle to show the effect's options and then specify the option values.

See also

"Using the Effects panel" on page 252

To remove an effect from a clip

1 Select the clip in the Timeline panel.

2 In the Effect Controls panel, select the effect or Shift-click to select multiple effects.

Note: You cannot remove Fixed effects: Motion, Opacity, and Volume.

3 Do one of the following:

• Press Delete or Backspace.

• Choose Delete Selected Effect or Delete All Effects From Clip from the Effect Controls panel menu.

To copy and paste one or more effects

You can copy and paste one or more effects from one clip to another in the Effect Controls panel. You can also copy all effect values (including keyframes for Fixed and Standard effects) from one clip to another using the Paste Attributes command.

If the effect includes keyframes, these appear at comparable positions in the target clip, starting at the beginning of the clip. If the target clip is shorter than the source clip, keyframes are pasted beyond the target clip's Out point. To view these keyframes, move the clip's Out point to a time later than the keyframe's placement, or deselect the Pin To Clip option.

1 In the Timeline panel, select the clip that contains the effect or effects you want to copy.

2 In the Effect Controls panel, select the effect you want to copy or Shift-click to select multiple effects.

3 Choose Edit > Copy.

4 In the Timeline panel, select the clip to which you want to copy the effect and choose one of the following:

• To paste one or more effects, choose Edit > Paste.

• To paste all effects, choose Edit > Paste Attributes.

See also

"About the Effect Controls panel" on page 255

Adjusting effects

About the Effect Controls panel

When you apply an effect, the Effect Controls panel lists all the effects that are applied to the currently selected clip. Fixed effects are included with every clip: the Motion and Opacity effects are listed in the Video Effects section and the Volume effect is listed in the Audio Effects section. The Volume effect is included only for audio clips or video clips with linked audio.

Choose Window > Effect Controls or click the Effect Controls tab to view the Effect Controls panel. Although you can view the Effect Controls panel in a separate panel, you can also dock it by dragging the tab onto another panel.

You can quickly optimize the workspace for effects editing by choosing Window > Workspace > Effects.
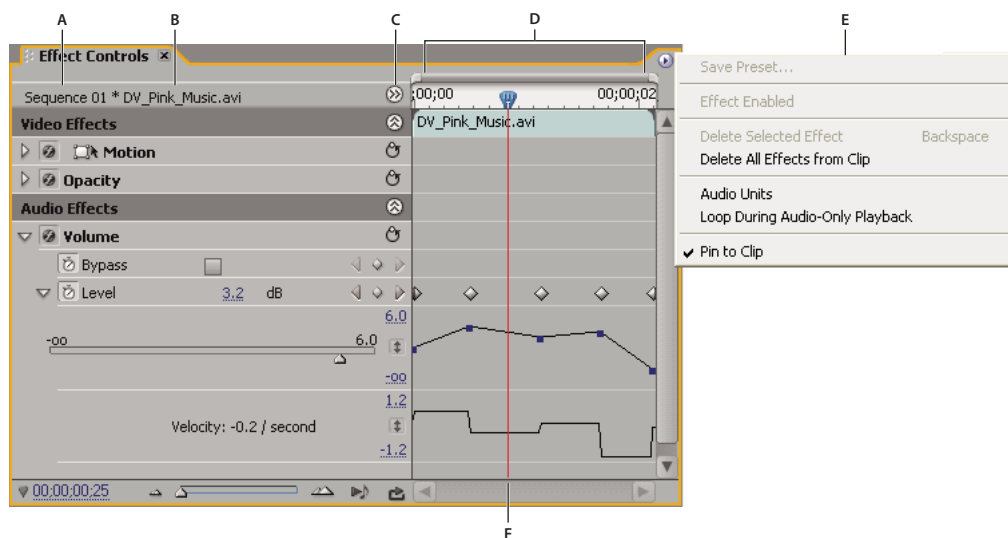
Effect Controls panel
A. Sequence name B. Clip name C. Show/Hide Timeline button D. Keyframe area E. Effect Controls panel menu F. Current -time indicator

The Effect Controls panel includes a timeline, current-time indicator, zoom controls, and a navigator area similar to those found in the Program Monitor and Timeline panel. When you animate effect properties using keyframing, you can click the triangle to expand an effect property to display the Value (for properties) and Velocity (speed of the property changes) graphs for making precise adjustments to keyframes. You can fine-tune the speed and smoothness of an effect's animation by manipulating a keyframe's Bezier handles to change the shape of the graph.
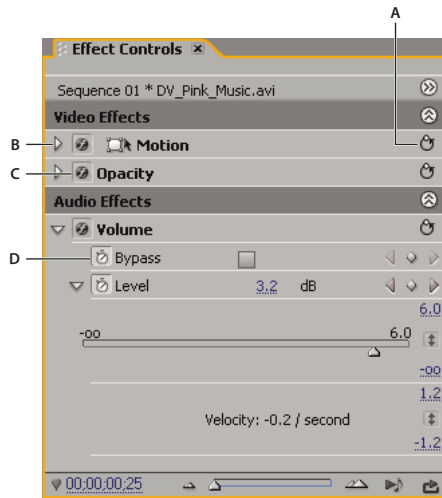
Effect Controls panel
***A.** Reset Effect button* ***B.** Show/Hide Effects button* ***C.** Toggle The Effect On Or Off button* ***D.** Toggle-Animation button*

When a clip is selected in the Timeline panel, the Effect Controls panel automatically adjusts the zoom level so that icons for the clip's In and Out points are centered in the timeline. You can view the rest of the Timeline panel by deselecting Pin To Clip in the Effect Controls panel menu. You don't need to position the current-time indicator over a clip to activate the Effect Controls panel. The Effect Controls panel also includes controls for playing and looping audio clips. Under the Effect Controls panel' time ruler is the *keyframe area,* where you can set keyframes for the value for each effect property at a particular frame.
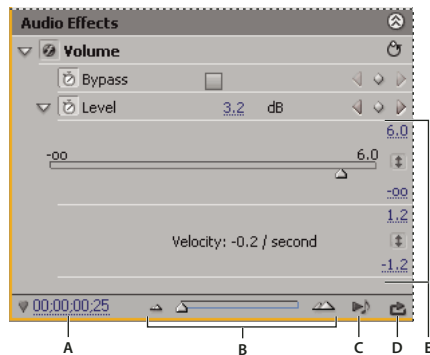
Effect Controls panel
***A.** Current time* ***B.** Zoom controls* ***C.** Play Only The Audio For This Clip* ***D.** Toggle Looping Audio Playback* ***E.** Effect values*

See also

"To edit keyframe graphs in the Effect Controls panel" on page 238

"About keyframes" on page 230

"To apply an effect to a clip" on page 253

To view effects in the Effect Controls panel

❖ In the Effect Controls panel, do any of the following:

• To view all effects applied to a clip, select the clip in the Timeline panel.

Note: *The Effect Controls panel will not display effects if multiple clips are selected in the Timeline panel.*

- To expand or collapse video or audio effects headings, click the Show/Hide button in the heading. When the arrows are pointing up ⊗, the heading is expanded to reveal all the effects in that section; when the arrows are pointing down ⊗, the heading is collapsed

- To expand or collapse an effect or its properties, click the triangle to the left of an effect or property name.Expanding a heading (such as Motion) reveals properties associated with that effect; expanding an individual property reveals a graphical control, such as a slider or dial.

- To reorder the effects, click an effect name, and drag it to a new location in the list. A black line appears while you drag when the effect is above or below another effect. When you release the mouse, the effect appears in the new position.

Note: *Fixed effects (Motion, Opacity, and Volume) cannot be reordered.*

- To show the timeline beyond a clip's In and Out points, deselect Pin To Clip from the Effect Controls panel menu. The areas of the timeline beyond the selected clip's In and Out points appear in gray. When Pin To Clip is selected, only the timeline between the clip's In and Out points appear.

- To play audio in the selected clip, click the Play Audio button ▶♪ . This control is only available if the selected clip contains audio.

To adjust or reset controls in the Effect Controls panel

The Effect Controls panel displays all the controls that you use to change parameter values for an effect. Controls can include underlined text, sliders, effect point icons, angle controls, menus, color swatches, eyedroppers, and graphs.

❖ Do any of the following:

- To change a property value, scrub the underlined text left or right.

- Click the property value, enter a new value, and press Enter.

- Expand the property by clicking the triangle next to the property name (if available), and then drag the slider or angle control (depending on the property).

- To set an angle, drag inside the angle control area, scrub the underlined text, or select the underlined text and enter a value.

💡 *Once you have clicked inside the angle control, you can drag outside of it to quickly change the values.*

- To set a color value using an Eyedropper tool, click the desired color anywhere on the computer screen. By default, the Eyedropper tool selects a one pixel area. Ctrl-clicking an Eyedropper tool samples a 5 x 5 pixel area.

- To set a color value using the Adobe Color Picker, click the color swatch, select a color in the Adobe Color Picker dialog box, and then click OK.

- To reset an effect's properties to their default settings, click the Reset button 🖰 next to the effect. All properties that don't contain keyframes are reset to their default values. If a property contains keyframes, that property is reset to the default at the current time only. Keyframes that occur at the current time are reset to the default value. If no keyframes occur at the current time, new keyframes are created using the default values.

💡 *If you accidently click Reset, restore your work by choosing Edit > Undo.*

To disable or enable effects in a clip

❖ Select one or more effects in the Effect Controls panel, and do one of the following:

• Click the Effect button 🎯 to disable effects.

• Click an empty Effect button box to enable effects.

• Deselect or select the Effect Enabled command in the Effect Controls panel menu.

💡 *You can create a custom keyboard shortcut to toggle effects on and off.*

See also

"To customize keyboard shortcuts" on page 417

To create markers in the Effect Controls panel

In the Effect Controls panel, you can view all of the sequence markers that you created in the Timeline panel. You can also add markers to your sequence to designate where you would like to place effects and see the markers as you work in the Effect Controls panel. In addition, you can create and manipulate sequence markers directly in the Effect Controls panel.

1 Drag the current-time indicator to the place where you want to create a marker.

2 Right-click in the timeline ruler, choose Set Sequence Marker, and then choose the type of marker you want to set.

See also

"About markers" on page 140

Customizing effect presets

Effect presets

You can customize individual effect settings and save them as presets. You can then apply the presets to other clips in any project. When you save an effect as a preset, you also save the keyframes you created for the effect. You create effect presets in the Effect Controls panel and Adobe Premiere Pro stores them in the root Presets bin. You can organize them within the Presets bin using the nested preset bins. Adobe Premiere Pro also ships with several effect presets, located in the application's Presets folder.

To view the properties of an effect preset, select the preset in the Effects panel, and choose Preset Properties from the Effects panel menu

If you apply a preset to a clip and the preset contains settings for an effect that is already applied to the clip, Adobe Premiere Pro modifies the clip using the following rules:

• If the effect preset contains a fixed effect—motion, opacity, or volume—then the action replaces the existing effect settings.

• If the effect preset contains a standard effect, the effect is added to the bottom of the current list of effects. However, if you drag the effect into the Effect Controls panel, you can place the effect anywhere in the hierarchy.

See also

"Using the Effects panel" on page 252

To create and save an effect preset

1 Display and select the clip that uses the effect with the settings that you want to save as a preset.

2 In the Effect Controls panel, select the effect you want to save, and choose Save Preset from the Effect Controls panel menu. You can only save one effect at a time as a preset.

3 In the Save Preset dialog box, specify a name for your preset. If desired, enter a description.

4 Select one of the following preset types to specify how Adobe Premiere Pro will handle keyframes when you apply the preset to a target clip, and then click OK:

Scale Scales the source keyframes proportionally to the length of the target clip. This action deletes any existing keyframes on the target clip.

Anchor To In Point Positions the preset's first keyframe at the same distance from the target clip's In point as it was from the original clip's In point. For example, if the first keyframe was 1 second from the In Point of the source clip when you saved the preset, then this option adds the keyframe at 1 second from the In point of the target clip, and adds all other keyframes relative to that position, without any scaling.

Anchor To Out Point Positions the preset's last keyframe at the same distance from the target clip's Out point as it was from the original clip's Out point. For example, if the first keyframe was 1 second from the Out point of the source clip when you saved the preset, then this option adds the keyframe at 1 second from the Out point of the target clip, and adds all other keyframes relative to that position, without any scaling.

To apply an effect preset

❖ In the Effects panel, expand the Presets bin, and do one of the following:

• Drag the effect preset onto the clip in the Timeline panel.

• Select the clip in the Timeline panel, and then drag the effect preset into the Effect Controls panel.

To work with a custom or presets bin

Use custom bins to store your favorite effects, transitions, and presets in one place. You can create any number of custom and preset bins. As a result, you can also use the bins to reorganize the effects, transitions, and presets into categories that are intuitive to you or more appropriate for your project workflow.

You create and store custom and preset bins in the Effects panel. New preset bins reside inside the root Presets bin. Though you cannot drag them from the Presets bin, you can create and arrange them within that bin in any hierarchy you like. You can place custom bins at the top of the Effects panel hierarchy, or you can nest them within other custom bins.

Note: If you have placed the same item in several different custom bins, and you delete that item from one bin, Adobe Premiere Pro deletes each occurrence of the item from the custom and preset bins, and deletes each item from all clips that it affects.

1 In the Effects panel, do one of the following:

• To create a custom bin, click the New Custom Bin button ▦ , or choose New Custom Bin from the Effects panel menu.

- To create a presets bin, choose New Presets Bin from the Effects panel menu. Adobe Premiere Pro nests each new presets bin in the root Presets bin.

- To nest a new custom or presets bin, select the bin into which you want to place the new bin, and then create a custom or presets bin.

- To rename a bin, select the bin, then click the bin name, and then type a new name and press Enter. Skip steps 2 and 3.

- To delete a bin or an item in a bin, select the bin or bin item, and then click the Delete Custom Items button 🗑 at the bottom of the Effects panel. Skip steps 2 and 3.

2 Locate the effect, transition, or preset that you want to store in the bin. You may need to resize the panel so that you can see both the item and the bin.

3 Drag the item to the bin. Adobe Premiere Pro creates a shortcut to the item.

See also

"Effect presets" on page 258

Color and luminance

Adjusting color and luminance

In video, color correction encompasses adjusting both the hue (color or chroma) and luminance (brightness and contrast) in an image. Adjusting the color and luminance in video clips can create a mood, eliminate a color cast in a clip, correct video that's too dark or too light, or set the levels to meet broadcast requirements or to match color from scene to scene. Effects can also adjust the color and luminance to emphasize or de-emphasize a detail in a clip.

Adobe Premiere Pro's color and luminance adjusting effects can be found in the Color Correction bin inside the Video Effects bin. Although there are other effects that adjust color and luminance, the Color Correction effects are especially created for making very fine color and luminance corrections.

You apply the Color Correction effects to a clip the same way you apply all Standard effects. The effect properties are adjusted in the Effect Controls panel. The Color Correction effects and other color effects are clip-based. However, you can apply them to multiple clips by nesting sequences. For information about nesting sequences, see "Nesting sequences" on page 148.

💡 *In addition to the Color Correction effects, you can also use the Broadcast Colors effect to adjust a clip's colors to broadcast standards. For more information, see "Broadcast Colors effect" on page 346.*

When color correcting, it's useful to use Adobe Premiere Pro's Vectorscope or waveform scopes (YC Waveform, RGB Parade, and YCbCr Parade) to help you analyze the chroma and luminance in a clip. You can view a scope in a separate Reference Monitor that's ganged to the Program Monitor so that you can check your video levels as you make adjustments. For information about scopes, see "About the vectorscope and waveform monitors" on page 279.
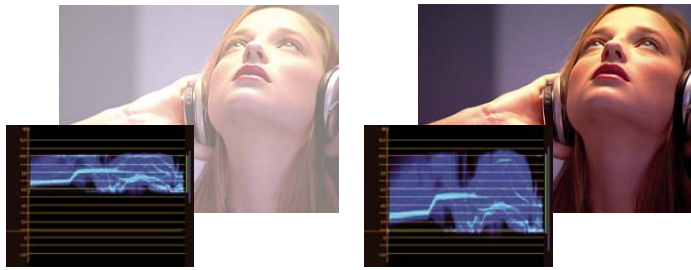
Correcting exposure: Overexposed image with the waveform in the upper limits of the IRE scale (left) and corrected image with the waveform within 7.5 to 100 IRE (right)

The following is a general guide for choosing which Color Correction effect to use:

Fast Color Corrector Makes quick color and luminance adjustments to the entire tonal range in a clip. The Fast Color Correct has both automatic and manual controls for setting the white balance, black level, gray level, and white level.

Luma Corrector Makes adjustments primarily to the luminance in a clip using numeric controls. The Luma Corrector lets you restrict adjustments to a specific tonal range or a specific range of colors.

Luma Curve Makes adjustments primarily to the luminance in a clip using a curve control. The curve controls are similar to the ones in Photoshop and After Effects users. The Luma Curve lets you restrict adjustments to a specific tonal range or a specific range of colors.

RGB Corrector Makes adjustments to the color and luminance in a clip using numeric controls. The RGB Corrector lets you restrict adjustments to a specific tonal range or a specific range of colors.

RGB Curves Makes adjustments to the color in a clip using curve controls. The curve controls are similar to the ones in Photoshop and After Effects users. The RGB Curves lets you restrict adjustments to a specific tonal range or a specific range of colors.

Three-Way Color Corrector Makes adjustments to the color and luminance in the shadows, midtones, and highlights of a clip. Corrections can be made to the individual tonal ranges or all at once. The Three-Way Color Corrector offers both numeric and graphic controls. The Three-Way Color Corrector also lets you restrict adjustments to a specific range of colors.

Video Limiter Adjusts the video signal to fall within certain limits. This effect is usually applied after color correcting with the other Color Correction effects.

For a tutorial on correcting color, go to Resource Center on the Adobe website.

To set up a Color Correction workspace

The following is a suggested procedure for setting up your color correction workspace. It's meant only as a starting point so you can configure the workspace to suit your style of working.

1 (Optional) Connect a calibrated NTSC or PAL monitor to your computer. If you're creating video for broadcast, viewing the video on an NTSC or PAL monitor is essential for the most accurate preview.

2 Choose Window > Workspace > Color Correction.

To see a before and after comparison of your color correction, you can either display the master clip in the Source Monitor for comparison with the Program Monitor, or you can select the Split Screen Preview option in the Color Correction effects.

3 Make sure that the Draft Quality is not chosen in the Program Monitor menu. If possible, choose Highest Quality. If your computer performance suffers, then choose Automatic Quality instead.

4 (Optional) Choose New Reference Monitor from the Program Monitor menu. Move the Reference Monitor where you can see it and the Program Monitor easily.

Note: By default, the Gang To Program Monitor option is enabled in the Reference Monitor menu.

5 Choose any of the following scopes from the Reference Monitor menu:

Note: You can also display a scope in the Program Monitor instead of the Reference Monitor.

Vectorscope Displays a circular chart, similar to a color wheel, that shows the video's chrominance information. The Vectorscope is very useful when making color adjustments.

YC Waveform Displays the luminance (represented as green in the waveform) and chrominance (represented as blue) values in your clip.

YCbCr Parade Displays waveforms representing levels of the luminance and color difference channels in the digital video signal. Users comfortable with viewing YUV waveforms might consider using this scope when making color and luminance adjustments.

RGB Parade Displays waveforms representing the levels of the red, green, and blue channels in a clip. This graph is best for comparing the relationship between the three channels.

All Scopes Displays all scopes in one monitor.

Vect/YC Wave/YCbCr Parade Displays the Vectorscope, YC Waveform, and YCbCr Parade in one monitor.

Vect/YC Wave/RGB Parade Displays the Vectorscope, YC Waveform, and RGB Parade in one monitor.

See also

"About the vectorscope and waveform monitors" on page 279

To apply the Color Correction effects

The following procedure is a general overview of applying the Color Correction effects. See the following sections in this chapter for making adjustments using the specific controls.

1 Set up your workspace for color correction. If possible, make sure a calibrated NTSC or PAL monitor is connected to your computer.

2 Apply one of the Color Correction effects to the clip in the Timeline panel.

Note: If the clip is already selected in the Timeline panel, you can drag the effect to the Video Effects area of the Effect Controls panel.

3 In the Effect Controls panel, expand the Color Correction effect.

4 Move the current-time indicator to a frame that provides the best example of colors that need to be adjusted.

5 (Optional) Do any of the following to set preview options when correcting color:

• To view only the luminance values in a clip, choose Luma from the Output menu. This option only affects the preview in the Program Monitor, it doesn't remove the color from the video.

• To display a before and after view of the clip in one monitor, select the Show Split View option. You can specify whether the split view is horizontal or vertical by choosing from the Layout pop-up menu. You can also adjust the relative proportion of the before and after views.

6 (Optional) Use the Tonal Range Definition control to define the shadow, midtone, and highlight areas in the clip. You can choose Tonal Range from the Output menu to view the tonal ranges you defined. Once defined, choose from the Tonal Range menu to restrict the color corrections to a specific tonal range. See also "To define the tonal ranges in a clip" on page 271.

Note: Only the Luma Corrector, RGB Corrector, and Three-Way Color Corrector effects let you apply adjustments to a specific tonal range.

7 (Optional) Click the triangle to expand the Secondary Color Correction controls if you want to correct the exposure for a specific color or range of colors. Use the Eyedropper tool or the other Secondary Color Correction controls to specify the colors to correct. See also "To specify a color or range of colors to adjust" on page 272.

Note: All Color Correction effects have Secondary Color Correction controls except the Fast Color Corrector effect and Video Limiter effect.

8 Do any of the following:

• To adjust color balance and saturation using color wheels, adjust the Hue Balance and Angle wheels or numeric controls in the Fast Color Corrector or Three-Way Color Corrector effect. See also "Color balance, angle, and saturation controls" on page 265.

• To adjust luminance or color using a curve control, use the curve adjustments in the Luma Curve or RGB Curves effect. See also "To adjust color and luminance using curves" on page 267.

• To adjust luminance by setting the black, gray, and white levels, use the levels controls in the Fast Color Corrector or the Three-Way Color Corrector effect. See also "To adjust luminance using levels" on page 268.

• To adjust luminance or color using numeric controls, use the controls in the Luma Corrector or RGB Color Corrector effect. See "Luma Corrector effect" on page 298 and "RGB Color Corrector effect" on page 300.

💡 *Use keyframing to animate your color correction adjustment. This is especially useful when the lighting changes in a clip. See also "About keyframes" on page 230.*

9 (Optional) Apply the Video Limiter effect after you've made your color corrections to make the video signal conform to broadcast standards while preserving as much of the image quality as possible. It's recommended to use the YC Waveform scope to make sure the video signal is within the 7.5 to 100 IRE levels. See "Video Limiter effect" on page 305.

See also

"About the vectorscope and waveform monitors" on page 279

To quickly remove a color cast

The Fast Color Corrector and the Three-Way Color Corrector effects have controls to quickly balance colors so the white, grays, and black are neutral. The adjustment that neutralizes the color cast in a sampled area is applied to the entire image. This can remove the color cast in all colors. For example, if an image has an undesirable bluish cast, when you sample an area that should be white, the White Balance control adds yellow to neutralize the bluish cast. This yellow adjustment is added to all the colors in the scene, which should remove the color cast in the entire scene.

1 Select the clip in the Timeline panel and apply either the Fast Color Corrector or the Three-Way Color Corrector effect. See also "To apply an effect to a clip" on page 253

2 In the Effect Controls panel, click the triangle to expand the Fast Color Corrector or the Three-Way Color Corrector controls.

3 (Optional) Select the Show Split View option if you want to view a before and after comparison of your adjustment in the Program Monitor. You can specify whether the split view is horizontal or vertical by choosing from the Layout pop-up menu. You can also adjust the relative proportion of the before and after views.

4 Select the White Balance eyedropper and click to sample an area in the Program Monitor. It's best to sample an area that is supposed to be white.

💡 *If you only want to affect one color or a specific range of colors in the clip, use the Secondary Color Correction controls in the Three-Way Color Corrector.*

5 (Optional for the Three-Way Color Corrector only) Do any of the following:

• To color balance by neutralizing a medium-gray area of the image, select the Gray Balance eyedropper and click an area that's supposed to be a medium gray.

• To color balance by neutralizing a black area in the image, select the Black Balance eyedropper and click an area that's supposed to be black.

The Gray Balance control adjusts the sampled area to become a neutral gray and the Black Balance control adjusts the sampled area to become a neutral black. Like using the White Balance control, these adjustments affect all the colors in the clip.

Note: You can also click the color swatch next to the eyedroppers and use the Adobe Color Picker to select a sample color.

See also

"To specify a color or range of colors to adjust" on page 272

To make quick luminance corrections

The Fast Color Corrector and the Three-Way Color Corrector effects have automatic controls for making quick adjustments to the luminance in a clip.

1 Select the clip in the Timeline panel and apply either the Fast Color Corrector or the Three-Way Color Corrector. See also "To apply an effect to a clip" on page 253

2 In the Effect Controls panel, click the triangle to expand the Fast Color Corrector or the Three-Way Color Corrector controls.

3 (Optional) Select the Show Split View option if you want to view a before and after comparison of your adjustment in the Program Monitor. You can specify whether the split view is horizontal or vertical by choosing from the Layout pop-up menu. You can also adjust the relative proportion of the before and after views.

4 Click any of the following buttons to quickly adjust the luminance to broadcast standards:

Auto Black Level Raises the black levels in a clip so the darkest levels are above 7.5 IRE. A portion of the shadows is clipped and the intermediate pixel values are redistributed proportionately. As a result, using Auto Black Level lightens the shadows in an image.

Auto Contrast Applies both the Auto Black Level and Auto White Level simultaneously. This makes the highlights appear darker and shadows appear lighter.

Auto White Level Lowers the white levels in a clip so the lightest levels do not exceed 100 IRE. A portion of the highlights is clipped and the intermediate pixel values are redistributed proportionately. As a result, using Auto White Level darkens the highlights in an image.

Color balance, angle, and saturation controls

The Fast Color Corrector and the Three-Way Color Corrector effects offer Hue Balance and Angle color wheels and a Saturation control for balancing color in your video. Color balance is just what its name implies, balancing the red, green, and blue components to produce the desired color of white and neutral grays in the image. Depending on the desired effect, you may not want the color balance in a clip to be completely neutral. Perhaps you want a intimate family scene to have a warm (reddish) color cast or maybe the scene in your crime documentary requires a cool (bluish) color cast.

When making adjustments with the color wheel and Saturation control, it's useful open a Reference Monitor to view the Vectorscope ganged to the composite video in the Program Monitor.

The color wheel adjustments offer the following adjustments:

Hue Angle Rotates the color towards a target color. Moving the outer ring to the left rotates the colors towards green. Moving the outer ring to the right rotates the colors towards red.

Balance Magnitude Controls the intensity of the color introduced into the video. Moving the circle out from the center increases the magnitude (intensity). The intensity can be fine-tuned by moving the Balance Gain handle.

Balance Gain Affects the relative coarseness or fineness of the Balance Magnitude and Balance Angle adjustment. Keeping the perpendicular handle of this control close to the center of the wheel makes the adjustment very subtle (fine). Moving the handle towards to outer ring makes the adjustment very obvious (coarse).

Balance Angle Shifts the video color towards a target color. Moving the Balance Magnitude circle towards a specific hue shifts the color accordingly. The intensity of the shift is controlled by the combined adjustment of the Balance Magnitude and Balance Gain.

A B C D
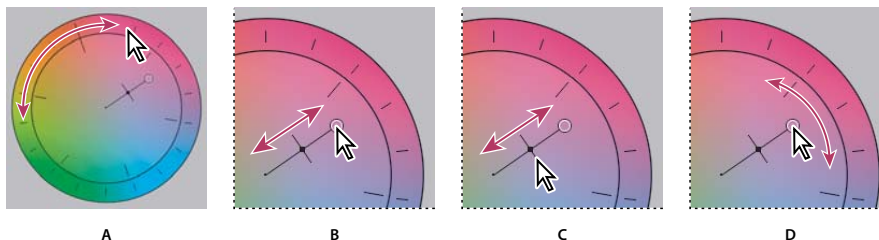
Color correction adjustments using the color wheel
A. Hue Angle B. Balance Magnitude C. Balance Gain D. Balance Angle

The Saturation slider controls the color saturation in the video. Moving the slider to 0 desaturates the image so only the luminance values show (an image made up of white, grays, and black). Moving the slider to the right increases the saturation.

Desaturated image (left); Saturated image (right)

See also

To adjust color balance and saturation

Although the following procedure uses the color wheel adjustments. The same adjustments can be made by entering numeric values or using the slider controls in the Fast Color Corrector and Three-Way Color Corrector effects.

1 Set up your workspace for color correction.

2 Select the clip in the Timeline panel and apply either the Fast Color Corrector or the Three-Way Color Corrector effect. See also "To apply an effect to a clip" on page 253.

3 In the Effect Controls panel, click the triangle to expand the Fast Color Corrector or the Three-Way Color Corrector controls.

4 (Optional) Select the Show Split View option if you want to view a before and after comparison of your adjustment in the Program Monitor. You can specify whether the split view is horizontal or vertical by choosing from the Layout pop-up menu. You can also adjust the relative proportion of the before and after views.

5 (Optional for the Three-Way Color Corrector only) Do any of the following:

• To restrict your color correction to a specific tonal range, choose Shadows, Midtones, or Highlights from the Tonal Range menu. Choosing Master applies color correction to the entire tonal range of the image. If necessary, use the Tonal Range Definition controls to define the different tonal ranges. You can choose Tonal Range from the Output menu to view a tri-tone preview of the tonal ranges in the Program Monitor.

• To restrict your adjustments to a color or range of colors, click the triangle to expand the Secondary Color Correction controls. Define the color or color range using the Eyedropper tool, slider controls or enter numeric values. See also "To specify a color or range of colors to adjust" on page 272.

6 To adjust the color balance, do any of the following using the color wheel:

• To change all the colors without affecting the gain or magnitude, rotate the outer ring. Rotating the ring to the left, rotates all colors towards green. Rotating the ring to the right, rotates all colors towards red.

Rotating the outer ring of the color wheel (left) changes the hue angle (right).

• To shift the colors towards a target color with gain and magnitude adjustment, drag the Balance Magnitude circle out from the center towards the color you want introduced into the image. The farther you drag the Balance Magnitude from the center, the introduced color is more intense. Drag the Balance Gain handle to fine-tune the intensity of the Balance Magnitude adjustment. You can make the adjustment very subtle.
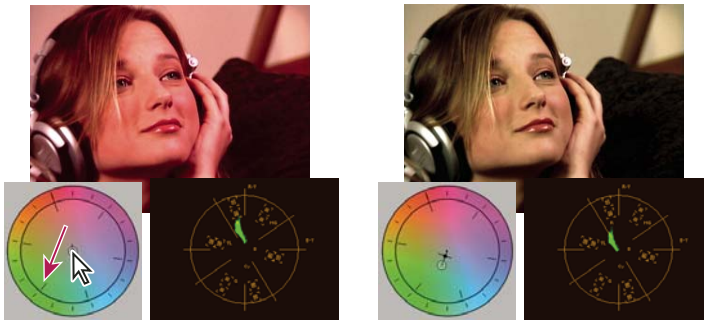
Adjusting the Balance Gain to fine-tune the Balance Magnitude setting.

Note: *The Three-Way Color Corrector effect lets you make separate adjustments to the three tonal ranges using individual wheels for the shadows, midtones, and highlights.*

7 Use the Saturation control to adjust the color saturation in the image. Moving the slider to the left (lower value) desaturates the colors. Moving the slider to the right (higher values) increases the color saturation.

To adjust color and luminance using curves

The curves adjustment of the Luma Curve and the RGB Curves effects, like the Levels sliders in the Fast Color Corrector and the Three-Way Color Corrector effects, let you adjust the entire tonal range or just a selected range of colors in a video clip. But unlike Levels, which has only three adjustments (black level, gray level, and white level), the Luma Curve and RGB Curves let you adjust up to 16 different points throughout an image's tonal range (from shadows to highlights).

Opening a scope in a Reference Monitor that's ganged to the Program Monitor lets you view the luminance, chrominance, or both values as you make the curves adjustments. If you're using the Vector scope, there should be minimal green shading in the areas outside of the center of the scope. Areas outside the center define the level of color saturation.

1 In the Effects panel, click the triangle to expand the Video Effects bin, and then click the triangle to expand the Color Correction bin.

2 Drag one of the following effects to the clip in the Timeline panel:

Luma Curve Adjusts primarily luminance. Keep in mind that adjusting the luminance does affect the perceived saturation of the colors.

RGB Curves Adjusts both color and luminance.

Note: *If a clip is selected in the Timeline panel, you can drag the effect to the Video Effects section of the Effect Controls panel.*

3 In the Effect Controls panel, click the triangle to expand the Luma Curve or RGB Curves controls.

4 (Optional) Do any of the following to set preview options:

• To view only the luminance values in a clip, choose Luma from the Output menu. This option affects only the preview in the Program Monitor; it doesn't remove the color from the video.

• To display a before and after view of the clip in one monitor, select the Show Split View option. You can specify whether the split view is horizontal or vertical by choosing from the Layout menu. You can also adjust the relative proportion of the before and after views.

5 (Optional) Click the triangle to expand the Secondary Color Correction controls if you want to correct the exposure for a specific color or range of colors. Use the Eyedropper tool or the other Secondary Color Correction controls to specify the colors to correct.

6 Do one of the following to make curve adjustments:

• To adjust the luminance, click to add a point on the Luma or Master graph and drag to change the shape of the curve. Bowing the curve upward lightens the clip and bowing the curve downward darkens the clip. The steeper sections of the curve represent portions of the image with greater contrast.

• To adjust both the color and luminance using the RGB Curves effect, click to add a point on the appropriate graph to adjust all color channels (Master), the red channel, the green channel, or the blue channel. Drag to change the shape of the curve. Bowing the curve upward lightens the pixel values and bowing the curve downward darkens the pixel values. The steeper sections of the curve represent portions of the image with greater contrast.

You can add a maximum of 16 points to the curve. To delete a point, drag it off the graph.

💡 *As you make adjustments, watch carefully for banding, noise, or polarization in the image. If you notice any of these, reduce the value you are adjusting.*
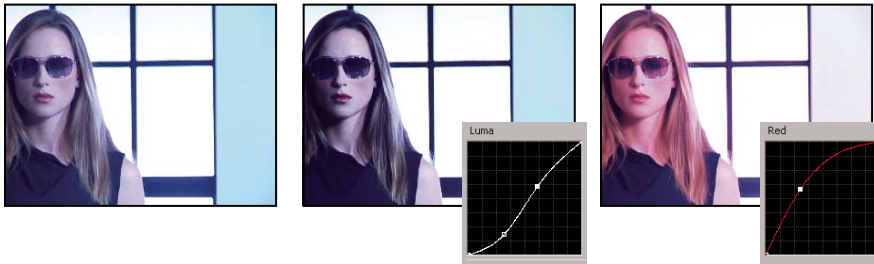
Original image (left), adjusting luminance (center), adjusting color (right)

See also

"To specify a color or range of colors to adjust" on page 272

"Luma Curve effect" on page 299

"RGB Curves effect" on page 302

"To set up a Color Correction workspace" on page 261

To adjust luminance using levels

The Fast Color Corrector and the Three-Way Color Corrector effects have Input Levels and Output Levels controls to adjust the luminance in a clip. The controls are similar to the ones in Photoshop's Levels dialog box. In the Fast Color Corrector effect, control settings are applied to all three color channels in a clip. The Three-Way Color Corrector effect lets you apply the levels adjustments to the entire tonal range in the clip, a specific tonal range, or specific range of colors.

1 (Optional) Set up your workspace for color correction. When adjusting luminance, it might be best to view the YC Waveform in a Reference Monitor ganged to the Program Monitor.

2 In the Effects panel, click the triangle to expand the Video Effects bin, and then click the triangle to expand the Color Correction bin.

3 Drag the Fast Color Corrector effect or the Three-Way Color Corrector to the clip in the Timeline panel.

💡 *If the clip is already selected in the Timeline panel, you can drag the effect to the Video Effects area of the Effect
Controls panel.*

4 In the Effect Controls panel, click the triangle to expand the Fast Color Corrector or Three-Way Color Corrector
controls.

5 (Optional) Do any of the following to set preview options:

• To view only the luminance values in a clip, choose Luma from the Output menu. This option only affects the
preview in the Program Monitor, it doesn't remove the color from the video.

• To display a before and after view of the clip in one monitor, select the Show Split View option. You can specify
whether the split view is horizontal or vertical by choosing from the Layout pop-up menu. You can also adjust the
relative proportion of the before and after views.

6 (Optional for the Three-Way Color Corrector only) Do any of the following:

• To restrict your correction to a specific tonal range, choose Shadows, Midtones, or Highlights from the Tonal
Range menu. Choosing Master applies correction to the entire tonal range of the image. If necessary, use the Tonal
Range Definition controls to define the different tonal ranges. You can choose Tonal Range from the Output menu
to view a tri-tone preview of the tonal ranges in the Program Monitor.

• To restrict your adjustments to a color or range of colors, click the triangle to expand the Secondary Color
Correction controls. Define the color or color range using the Eyedropper tool, slider controls or enter numeric
values. See also "To specify a color or range of colors to adjust" on page 272.

7 Use the Output Levels slider controls to set the maximum black and white levels:

Black Output slider Controls the resulting output of the shadows. The default is 0, where the pixels are completely
black. Moving the slider to the right specifies a lighter value for the darkest shadow.

White Output slider Controls the resulting output of the highlights. The default is 255, where the pixels are
completely white. Moving the slider to the right specifies a darker value for the brightest highlight.

💡 *If the YC Waveform is displayed in a Reference Monitor, adjust the Black Output and White Output sliders so the
maximum black and white levels of the waveform are within 7.5 to 100 IRE. This ensures that the levels are within
broadcast standards.*

Original image (left); blacks and whites corrected to broadcast limits (right)

8 Use the following controls to set the black, gray, and white input levels:

Black Level eyedropper Maps the sampled tone to the setting of the Black Output slider. Click an area in the
Program Monitor that you want to be the darkest value in the image. You can also click the color swatch to open the
Adobe Color Picker and select a color to define the darkest shadow in the image.

Gray Level eyedropper Maps the sampled tone to a medium gray (level 128). This changes the intensity values of the middle range of gray tones without dramatically altering the highlights and shadows. You can also click the color swatch to open the Adobe Color Picker and select a color to define the medium gray in the image.

White Level eyedropper Maps the sampled tone to the setting of the White Output slider. Click an area in the Program Monitor that you want to be the lightest value in the image. You can also click the color swatch to open the Adobe Color Picker and select a color to define the lightest highlight in the image.

Black Input Level slider Maps the input black level to the setting of the Black Output slider. By default, the Output black slider is set to 0, where the pixels are completely black. If you've adjusted the Black Output to 7.5 IRE or higher, the darkest shadow will be mapped to that level.

Gray Input Level slider Controls the midtones and changes the intensity values of the middle range of gray tones without dramatically altering the highlights and shadows.

White Input Level slider Maps the input white level to the setting of the White Output slider. By default, the Output white slider is set to 255, where the pixels are completely white. If you've adjusted the White Output to 100 IRE or lower, the lightest highlight will be mapped to that level.

Note: You can also adjust the Input and Output levels by scrubbing the underlined text or typing a value for Input Black Level, Input Gray Level, Input White Level, Output Black Level, and Output White Level.

See also

"Fast Color Corrector effect" on page 297

"Three-Way Color Corrector effect" on page 303

"To define the tonal ranges in a clip" on page 271

"To specify a color or range of colors to adjust" on page 272

About the Adobe Color Picker

You select a color in the Adobe Color Picker either by choosing from a color spectrum or by defining the color numerically. You can use the Adobe Color Picker to set target colors in some color and tonal adjustment effects. Clicking a color swatch in an effect's controls opens the Adobe Color Picker.

When you select a color in the Adobe Color Picker, it simultaneously displays the numeric values for HSB, RGB, HSL, YUV, and hexadecimal numbers. This is useful for viewing how the different color modes describe a color.

In the Adobe Color Picker, you can select colors based on the HSB (hue, saturation, brightness), RGB (red, green, blue), HSL (hue, saturation, luminance), or YUV (luminance and color difference channels) color models, or specify a color based on its hexadecimal values. Selecting the Only Web Colors option configures the Adobe Color Picker so that you can choose only from web-safe colors. The color field in the Adobe Color Picker can display color components in HSB color mode, RGB color mode, HSL color mode or YUV color mode.
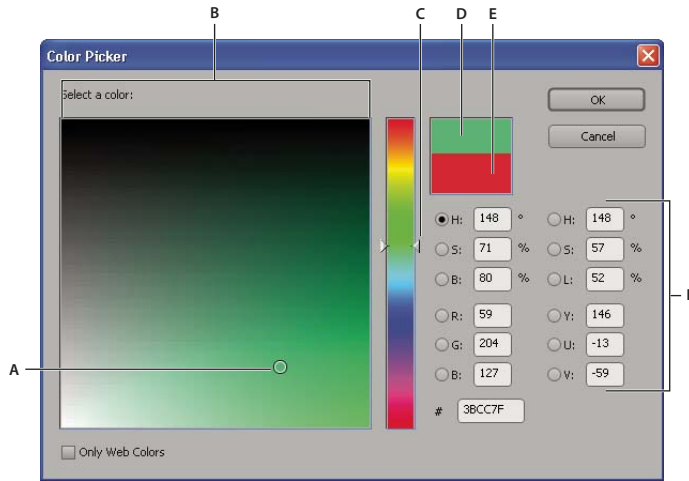
Adobe Color Picker
A. Selected color *B.* Color field *C.* Color slider *D.* Original color *E.* Adjusted field *F.* Color values

To define the tonal ranges in a clip

The Luma Corrector, RGB Color Corrector, and Three-Way Color Corrector effects let you define the tonal ranges for the shadows, midtones, and highlights so you can apply a color correction to a specific tonal range in an image. When used along with the Secondary Color Correction controls, defining a tonal range can help you apply adjustments to very specific elements in the image.

1 Select the clip you want to correct in the Timeline panel and apply either the Luma Corrector, RGB Color Corrector, or Three-Way Color Corrector effect.

2 In the Effect Controls panel, click the triangle to expand the Luma Corrector, RGB Color Corrector, or Three-Way Color Corrector effect.

3 (Optional) Choose Tonal Range from the Output menu. This displays a tri-tone image of the shadows, midtones, and highlights areas in the image. The Tonal Range preview updates as you make changes to the Tonal Definition controls.

4 Click the triangle to expand the Tonal Range Definition control.
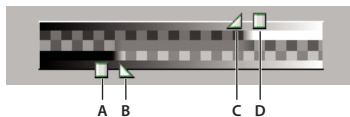
Tonal Range Definition control
A. Shadow threshold *B.* Shadow softness *C.* Highlight threshold *D.* Highlight softness

5 Drag the Shadow Threshold and Highlight Threshold sliders to define the shadow and highlight tonal ranges.

It's best if you make the adjustments while viewing the tri-tone Tonal Range display of the image.

6 Drag the Shadow Softness and Highlight Softness sliders to feather (soften) the boundaries between the tonal ranges.

The amount of fall-off depends on the image and how you want the color correction applied to it.

Note: You can also define the tonal ranges by changing the numeric values or moving the sliders for the Shadow Threshold, Shadow Softness, Highlight Threshold, and Highlight Softness.

Once you've defined the tonal range in the clip, you can use the Tonal Range menu to choose whether to apply the color correction to the shadows, midtones, highlights, or the entire tonal range (Master).
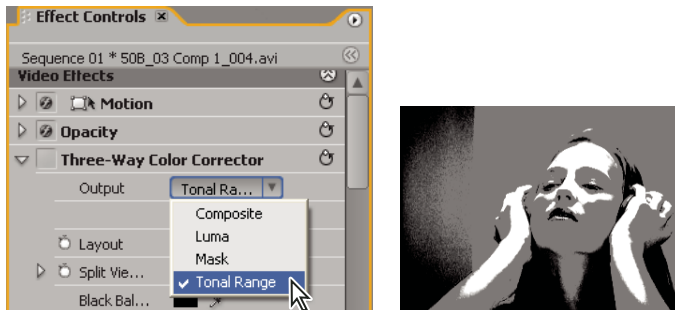
Choosing Tonal Range from Output menu to display shadow, midtone, and highlight regions in image.

To specify a color or range of colors to adjust

The Secondary Color Correction specifies the color range to be corrected by an effect. You can define the color by hue, saturation, and luminance. The Secondary Color Correction is available for the following effects: Luma Corrector, Luma Curve, RGB Color Corrector, RGB Curves, and Three-Way Color Corrector.

By specifying a color or range of colors using the Secondary Color Correction, you are isolating a color correction effect to specific areas of an image. This is similar to making a selection or masking an image in Photoshop. For example, you define a range of colors that selects only a blue shirt in an image. You can then change the color of the shirt without affecting any other areas of the image.

1 Select the clip you want to correct in the Timeline panel and apply either the Luma Corrector, Luma Curve, RGB Color Corrector, RGB Curves, or Three-Way Color Corrector effect.

2 In the Effect Controls panel, click the triangle to expand the Luma Corrector, Luma Curve, RGB Color Corrector, RGB Curves, or Three-Way Color Corrector effect.

3 Click the triangle to expand the Secondary Color Correction controls.

4 Select the Eyedropper tool and click the color you want to select in the Program Monitor. You can also click anywhere in the workspace to select a color, or click the color swatch to open the Adobe Color Picker and select a color.

5 Do any of the following to increase or decrease the range of colors you want to correct:

• Use the + Eyedropper tool to extend the color range, and use the – Eyedropper tool to subtract from the color range.

• Click the triangle to expand the Hue control, and then drag the Start Threshold and End Threshold sliders to define the color range where the correction is applied at 100%. Drag the Start Softness and End Softness sliders to control feathering, which determines whether the boundaries of the color range are sharply defined or soft. You can also enter the Start and End parameters numerically using the controls below the Hue control.

Note: The hue defined by the sliders can also be changed by dragging the upper or lower hue bands.
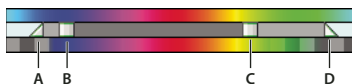
Hue control
A. Start threshold B. Start softness C. End threshold D. End softness

• Use the Saturation and Luma controls to specify saturation and luminance parameters for the color range to be color corrected. These controls fine-tune the range of color specification.

6 (Optional) Choose Mask from the Output menu to view the areas selected for adjustment. White represents areas that allow 100% color correction, and black represents areas protected (masked) from color correction. The gray areas allow partial application of the color correction. This Mask view updates as you make further adjustments to the Secondary Color Correction controls.
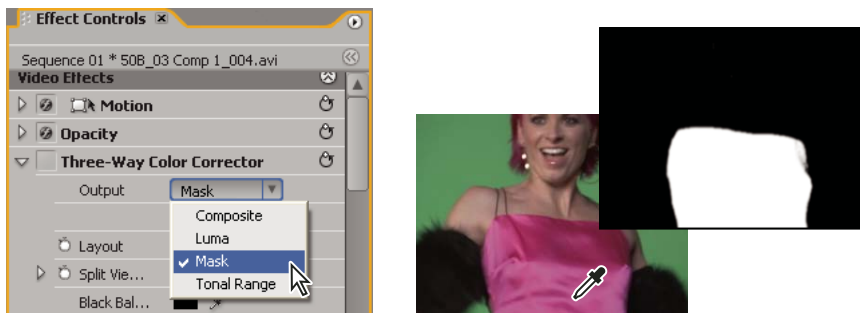
Choosing Mask from Output menu to display selected areas (white) and protected areas (black).

7 Use the following controls to specify how a color correction is applied to a color or range of colors:

Soften Applies a Gaussian blur to the selected area generated by the Secondary Color Correction controls. The range is from 0 to 100, and the default setting is 50. This control is useful for softening the application of the color correction to selected areas so that it blends with the rest of the image.

Edge Thinning Thins or spreads the edge of the selected area generated by the Secondary Color Correction controls. The range is from –100 (thin, sharply defined edges) to +100 (spread, diffused edges). The default value is 0.

8 Select the Invert Limit Color option to adjust all colors except the range that you specified using the Secondary Color Correction controls.

Special color and luminance adjustments

To match the color between two scenes

The Color Match effect can transfer color information from one image or clip to another. For example, use Color Match if you want to use the color-corrected color information in one clip as the basis for correcting the color of another clip. Or, if you have an image containing an area that you consider ideal and you would like to transfer color information from it to another image. This effect works best when you work between two images with slightly different exposures, such as those shot in identical locations, but on different days, or in slightly different lighting conditions.

If you need more control than the Color Match effect offers, use the Secondary Color Correction controls in the RGB Corrector, RGB Curves, and Three-Way Color Corrector. These controls let you adjust a single color or a range of colors.

1 Select the clip you want to adjust is in the Timeline panel so it displays in the Program Monitor.

2 If you want to match the information in the displayed clip to another clip in your project, open that other clip in the Source Monitor.

3 Apply the Color Match effect to the clip you want to adjust.

4 In the Effect Controls panel, click the triangle to expand the Color Match effect.

5 Choose a method for matching the clips from the Method menu:

HSL Matches using the hue, saturation, and luminance values in the clips. You can select whether apply the effect to the either a single component or any combination of the hue, saturation, or luminance components.

RGB Matches using the values of the red, green, and blue channels in the clips. You can select whether to match only one of the channels or any combination of the channels.

Curves Matches using the curves (brightness and contrast) values in the clips. You can also select whether to match only one of the channels or any combination of the channels.

6 Select a Sample eyedropper and click an area in either the Source Monitor or Program Monitor that represents the color information or attribute that you want to match. You can use eyedroppers for shadows, midtones, highlights, or all tonal ranges (Master).

Note: You can also click the color swatch next to an eyedropper tool and use the Adobe Color Picker to select a color.

7 Select the Target eyedropper with the same parameter as the Sample eyedropper. Click an area in the Program Monitor that represents the color information or attribute that you want to correct. For example, if you've selected a midtone sample area, click the Midtone Target eyedropper in the area in the target clip that you want to change.

8 Expand the Match category in the Color Match effect, and click the Match button. In the Program Monitor, the target area changes to match the source area.

9 Repeat steps 6 through 8 to add other adjustments.

To replace a color

💡 *If you need more control than the Color Replace effect offers, use the Secondary Color Correction controls in the RGB Corrector, RGB Curves, and Three-Way Color Corrector. These controls let you apply changes to a single color or a range of colors.*

1 Select the clip you want to adjust is in the Timeline panel so it displays in the Program Monitor.

2 If you want to replace a color in the displayed clip with a color in another clip in your project, open that other clip in the Source Monitor.

3 Apply the Color Replace effect to the clip you want to adjust.

4 In the Effect Controls panel, click the Setup icon ⇥▤ for the Color Replace effect.

5 In the Color Replace Settings dialog box, move the pointer over the Clip Sample image so it becomes an eyedropper, and then click to choose the color to be replaced. You can also click the Target Color swatch and select a color in the Adobe Color Picker.

6 Choose the replacement color by clicking the Replace Color swatch and selecting the color in the Adobe Color Picker.

7 Broaden or reduce the range of the color you're replacing by dragging the Similarity slider.

8 Select the Solid Colors option to replace the specified color without preserving any gray levels.

See also

"Color Replace effect" on page 315

To remove color in a clip

To quickly remove color in a clip, apply the Black & White effect from the Image Control bin of the Video Effects bin.

1 Set up your workspace for color correction.

2 Select the clip in the Timeline panel and apply either the Fast Color Corrector or the Three-Way Color Corrector. See also "To apply an effect to a clip" on page 253

3 In the Effect Controls panel, click the triangle to expand the Fast Color Corrector or the Three-Way Color Corrector controls.

4 (Optional) Select the Show Split View option if you want to view a before and after comparison of your adjustment in the Program Monitor. You can specify whether the split view is horizontal or vertical by choosing from the Layout pop-up menu. You can also adjust the relative proportion of the before and after views.

5 (Optional for the Three-Way Color Corrector only) Do any of the following:

• To restrict your adjustments to a specific tonal range, choose Shadows, Midtones, or Highlights from the Tonal Range menu. Choosing Master applies adjustments to the entire tonal range of the image. If necessary, use the Tonal Range Definition controls to define the different tonal ranges. You can choose Tonal Range from the Output menu to view a tri-tone preview of the tonal ranges in the Program Monitor.

• To restrict your adjustments to a color or range of colors, click the triangle to expand the Secondary Color Correction controls. Define the color or color range using the Eyedropper tool, slider controls or enter numeric values. See also "To specify a color or range of colors to adjust" on page 272.

6 Scrub the underlined text or enter a value lower than 100 for the Saturation control. You can also click the triangle to expand the control so you can drag the slider.

To mix color channels in a clip

1 In the Effects panel, click the triangle to expand the Video Effects bin, and then click the triangle to expand the Adjust bin.

2 Drag the Channel Mixer effect to the clip in the Timeline panel.

Note: If the clip is already selected in the Timeline panel, you can drag the Channel Mixer effect to the Video Effects section of the Effect Controls panel.

3 Decrease or increase a channel's contribution to the output channel by doing any of the following to a source color channel:

• Scrub an underlined value to the left or right.

• Click an underlined value, type a value between –200% and +200% in the value box, and press Enter.

• Click the triangle to expand the Channel Mixer controls, and drag the slider to the left or right.

4 (Optional) Drag the slider, scrub the underlined text, or type a value for the channel's constant value (Red-Const, Green-Const, or Blue-Const). This value adds a base amount of a channel to the output channel.

5 (Optional) Select the Monochrome option to create an image containing only gray values. This option achieves this result by applying the same settings to all the output channels.

See also

"Channel Mixer effect" on page 285

To isolate a single color using Color Pass

The Color Pass effect lets you isolate a single color or a range of colors. Adjustments are made in a dialog box showing the Clip Sample and Output Sample. You can also adjust the Color Pass effect properties in the Effect Controls panel.

If you want to color correct a single color or range of colors in a clip, use the Secondary Color Correction controls in the Color Correction effects.

1 Drag the Color Pass effect to a clip.

2 In the Effect Controls panel, click the Setup icon ⇢▤ for the Color Pass effect.

3 In the Color Pass Settings dialog box, do one of the following to select the color that you want to preserve:

• Move the pointer into the Clip Sample (the pointer turns into an eyedropper) and click to select a color.

• Click the color swatch, select a color in the Adobe Color Picker, and then click OK to close the Adobe Color Picker.

The selected color appears in the Output Sample.

4 For the Similarity option, drag the slider or enter a value to increase or decrease the color range to be preserved.

5 To reverse the effect, so that all colors except the specified color are preserved, select the Reverse option.

To animate this effect, use the keyframe features in the Effect Controls panel.

See also

"Color Pass effect" on page 315

"To specify a color or range of colors to adjust" on page 272

To adjust brightness using convolution

1 In the Effects panel, click the triangle to expand the Video Effects bin, and then click the triangle to expand the Adjust bin.

2 Drag the Convolution Kernel effect to the clip in the Timeline panel.

If the clip is already selected in the Timeline panel, you can drag the Convolution Kernel to the Video Effects section of the Effect Controls panel.

3 In the Effect Controls panel, click the Convolution Kernel Setup icon ⇢▤.

4 In the Convolution Matrix section of the Convolution Kernel Settings dialog box, click the center text box in the group of nine boxes. This box represents the pixel being evaluated.

5 Type a value (from –999 to +999) by which you want to multiply that pixel's brightness value.

6 Click a text box representing an adjacent pixel to which you want to assign a weighted value.

7 Type the value by which you want the pixel in that position multiplied. For example, if you want the brightness value of the pixel to the right of the evaluated pixel multiplied by 2, type 2 in the text box to the right of the center box.

8 Repeat the step 7 for all pixels that you want to include in the operation. You don't need to type values in all of the text boxes.

9 In the Scale text box, type the value by which to divide the sum of the brightness values of the pixels included in the calculation.

10 In the Offset text box, type the value to be added to the result of the scale calculation.

💡 *Use the Load and Save buttons in the dialog box to save convolution settings in a separate file, which you can then load for reuse in other instances of the effect.*

11 Click OK.

The effect is applied to each pixel in the clip, one at a time.

See also

"Convolution Kernel effect" on page 286

To use Lighting Effects

Use Lighting Effects to apply lighting effects to a clip. You can use up to five lights to introduce creative effects. You can control such lighting properties as lighting type, direction, intensity, color, lighting center, and lighting spread. There is also a Bump Layer control for using textures or patterns from other footage to produce special effects such as a 3D-like surface effect.

Note: All Lighting Effects properties except Bump Layer can be animated using keyframes.

You can directly manipulate the Lighting Effects properties in the Program Monitor. Click the Transform icon 🔲 next to Lighting Effects in the Effect Controls panel to display the adjustment handles and Center circle.

Lighting Effects: Original image (left), Spotlight applied to image (center), and Omnilight applied to image (right)

1 In the Effects panel, expand the Video Effects bin, expand the Adjust bin, and then drag the Lighting Effects onto a clip in the Timeline panel.

💡 *If a clip is already selected in the Timeline panel, you can drag the Lighting Effects directly to the Video Effects section of the Effect Controls panel.*

2 In the Effect Controls panel, click the triangle to expand the Lighting Effects.

3 Click the triangle to expand Light 1.

4 Choose a light type from the pop-up menu to specify the light source:

None Turns off a light.

Directional Shines light from far away so that the light angle doesn't change—like the sun.

Omni Shines light in all directions from directly above the image—like a light bulb over a piece of paper.

Spotlight Casts an elliptical beam of light.

5 To specify a color for the light, do one of the following:

• Click the color swatch, select a color using the Adobe Color Picker, and then click OK.

• Click the Eyedropper icon and then click anywhere on the computer desktop to select a color.

6 (Optional) Click the Transform icon to display the light's handles and Center circle in the Program Monitor. You can directly manipulate the position, scale, and rotation of a light by dragging its handles and Center circle ⊕.

Note: If you have more than one light, Center circles for each light appear in the Program Monitor. Clicking a Center circle displays the handles for a specific light.

7 In the Effect Controls panel, use the following controls to set the properties for the individual source light:

Center Moves the light using X and Y coordinate values for the center of the light. You can also position a light by dragging its Center circle in the Program Monitor.

Major Radius Adjusts the length of an Omni light or Spotlight. You can also drag one of the handles in the Program Monitor.

Projected Radius Adjusts the proximity of a Directional light's source to the Center circle ⊕. A value of 0 positions the light at the Center circle and floods the image with light. A value of 100 moves the light source far from the Center circle, decreasing the light falling on the image. In the Program Monitor, you can also drag the light source point to adjust its distance from the Center circle.

Minor Radius Adjusts the width of a Spotlight. Once the light becomes a circle, increasing the Minor Radius also increases the Major Radius. You can also drag one of the handles in the Program Monitor to adjust this property.

Angle Changes the direction of a Directional light or Spotlight. Adjust this control by specifying a value in degrees. You can also move the pointer outside a handle in the Program Monitor until it turns into a double-headed curved arrow ↰, and then drag to rotate the light.

Intensity Controls whether a light is bright or less intense.

Focus Adjusts the size of the Spotlight's brightest area.

Important: The Light Type determines which Lighting Effects properties are available. Make sure to click the Transform icon to display a light's handles and Center circle in the Program Monitor.

8 Use the following controls to set the Lighting Effects properties:

Ambient Light Color Changes the color of the ambient light.

Ambience Intensity Diffuses the light as if it were combined with other light in a room, such as sunlight or fluorescent light. Choose a value of 100 to use only the light source, or a value of –100 to remove the light source. To change the color of the ambient light, click the color box and use the color picker that appears.

Surface Gloss Determines how much the surface reflects light (as on the surface of a piece of photographic paper) from –100 (low reflectance) to 100 (high reflectance).

Surface Material Determines which is more reflective: the light or the object on which the light is cast. A value of –100 reflects the light's color, and a value of 100 reflects the object's color.

Exposure Increases (positive values) or decreases (negative values) the light's brightness. A value of 0 is the default brightness of the light.

9 (Optional) Repeat steps 3 - 7 to add more lights (Light 2 - Light 5).

10 (Optional) If you added a clip to use as a bump layer (Lighting Effects texture), choose the track containing the bump layer clip from the Bump Layer pop-up menu. Use the controls to adjust the properties for the bump layer.

See also

To apply Lighting Effects textures

A bump layer in the Lighting Effects lets you use the pattern or texture from a clip to control how light reflects off an image. Using a clip with textures like paper or water can create a 3D-like lighting effect.

1 Add the clip you want to use as a bump layer (texture) to a separate track in your sequence.

2 Click the Toggle Track Output icon ⊙ to hide the track containing bump layer clip.

3 Add the Lighting Effects to a clip in the same sequence.

4 In the Effect Controls panel, click the triangle to expand the Lighting Effects.

5 (Optional) Click the triangle next to Light 1 to adjust the light's properties.

6 Choose the video track containing the bump layer from the Bump Layer menu.

7 From the Bump Channel menu, specify whether to use the bump layer clip's red, green, blue, or alpha channel to create the lighting effects texture.

8 Select the White Is High option to raise the white parts of the channel from the surface. Deselect this option to raise the dark parts.

9 Scrub the underlined text to specify the Bump Height value from flat (0) to mountainous (100).

Vectorscope and waveform monitors

About the vectorscope and waveform monitors

Adobe Premiere Pro has a *vectorscope* and *waveform monitors* (YC Waveform, YCbCr Parade, and RGB Parade) to help you output a video program that meets broadcast standards and also assist you in making adjustments based on aesthetic considerations, such as color corrections.

For decades, video production and duplication facilities have used *waveform monitors* and *vectorscopes* to accurately evaluate video *levels*—specifically, color and brightness.

A vectorscope measures the *chrominance* (color components) of a video signal, including *hue* and *saturation*. A vectorscope maps a video's color information onto a circular chart.

The traditional waveform monitor is useful in measuring the brightness, or *luminance* component, of a video signal. In Adobe Premiere Pro, the waveform monitors can also display chrominance information. The waveform monitor works something like a graph. The horizontal axis of the graph corresponds to the video image from left to right. Vertically, the waveform displays the luminance or chrominance levels.

Vectorscope

The Vectorscope displays a circular chart, similar to a color wheel, that shows the video's chrominance information. Saturation is measured from the center of the chart outward. Saturated, vivid colors produce a pattern some distance from the center of the chart, while a black-and-white image produces only a dot at the center of the chart. The particular color, or hue, of the image determines the direction (angle of the pattern). Small target boxes ⊞ indicate where fully saturated magenta, blue, cyan, green, yellow, and red (present in a color bars test pattern) should appear. In NTSC video, chrominance levels should not exceed these target areas.
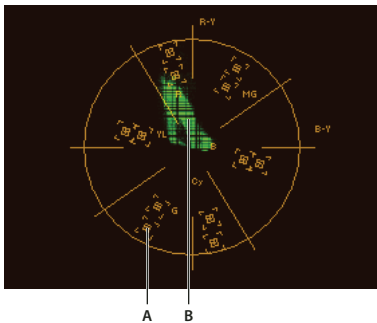
Vectorscope
A. Target boxes B. Image profile

The Vectorscope has the following controls:

Intensity Adjusts the brightness of the pattern display. It does not affect the video output signal.

75% Displays an approximate representation of the chrominance in the analog signal output.

100% Displays the chrominance in the digital video signal information.

YC Waveform

The YC Waveform displays a graph showing the signal intensity in the video clip. The horizontal axis of the graph corresponds to the video image (from left to right) and the vertical axis is the signal intensity in units called *IRE* (named for the Institute of Radio Engineers).

The YC Waveform displays luminance information as a green waveform. Bright objects produce a waveform pattern (bright green areas) near the top of the graph; darker objects produce a waveform toward the bottom. For NTSC video in the United States, luminance levels should range from 7.5 to 100 IRE (sometimes referred to as the *legal broadcast limit*). Japan's implementation of NTSC standards permits a luminance range from 0 to 100 IRE. Generally, luminance and chroma values should be about the same and distributed evenly across the 7.5 to 100 IRE range.

The YC Waveform also displays chrominance information as a blue waveform. The chrominance information is overlaid upon the luminance waveform.

You can specify whether the YC Waveform displays both luminance and chrominance information, or just luminance information.
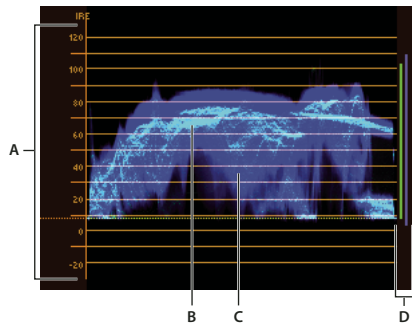
YC Waveform
A. IRE units B. Luminance (green) waveform C. Chrominance (blue) waveform D. Range of signal components

The YC Waveform has the following controls:

Intensity Adjusts the brightness of the waveform display. It does not affect the video output signal.

Setup (7.5 IRE) Displays a waveform that approximates the final analog video output signal. Deselecting this option displays the digital video information.

Chroma Displays both chrominance in addition to luminance information. Deselecting this option displays only the luminance.

YCbCr Parade

The YCbCr Parade scope displays waveforms representing levels of the luminance and color difference channels in the video signal. The waveforms appear in a graph one-after-another, parade-like.

The Intensity control adjusts the brightness of the waveforms. It does not affect the video output signal.

Note: CbCr are the color difference channels in a digital video signal. Cb is blue minus luma and Cr is red minus luma.
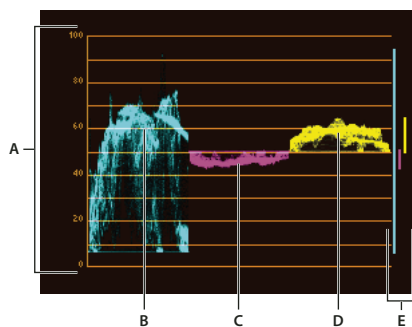
YCbGr Parade scope
A. Values B. Y (luminance) waveform C. Cb waveform D. Cr waveform E. Range of signal components

RGB Parade

The RGB Parade scope displays waveforms representing the levels of the red, green, and blue channels in a clip. The waveforms appear in a graph one after another, in parade fashion. This scope is useful for viewing the distribution of the color components in a clip. The levels of each color channel are measured proportionately to each other using a scale of 0 to 100.

The Intensity control adjusts the brightness of the waveforms. It doesn't affect the video output signal.
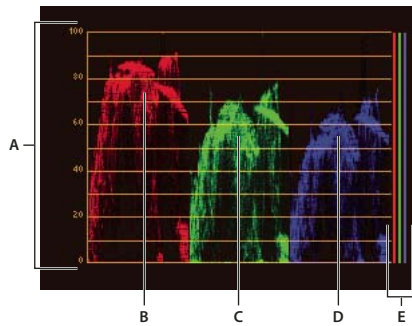
RGB Parade scope
A. *Values* *B.* *R waveform* *C.* *G waveform* *D.* *B waveform* *E.* *Range of signal components*

To view a scope

You can view a vectorscope, YC waveform, YCbCr Parade, and an RGB Parade scope either individually or grouped in the Reference Monitor, Program Monitor, or Source Monitor.

1 Depending on whether you want to view a scope for a master clip or sequence clip, do one of the following:

• Double-click the clip in the Project panel.

• In the Timeline panel, position the current-time indicator in the sequence you want.

2 (Optional) Choose New Reference Monitor from the Program Monitor menu if you selected a clip in the Timeline panel.

3 Choose any of the following from either the Reference Monitor, Program Monitor, or Source Monitor menu:

All Scopes Displays the Vectorscope, YC Waveform, YCbCr Parade, and RGB Parade scopes in one monitor.

Vectorscope Displays a vectorscope for viewing the chrominance in the video.

YC Waveform Displays a waveform monitor for viewing luminance and chrominance information.

YCbCr Parade Displays a scope with luminance (Y) and color difference (Cb and Cr) information.

RGB Parade Displays a scope showing the red, green, and blue components in the video.

Vect/YC Wave/YCbCr Parade Displays the Vectorscope, YC Waveform, and YCbCr Parade scope in one monitor.

Vect/YC Wave/RGB Parade Displays the Vectorscope, YC Waveform, and RGB Parade scope in one monitor.

Chapter 14: Effects: Reference

Gallery of effects

Gallery of effects

The samples below illustrate just some of the video effects included with Adobe Premiere Pro. To preview an effect not in this gallery, apply it and preview it in the Program Monitor.

Original image   *Bevel Alpha*   *Bevel Edges*   *Brightness & Contrast*

Camera Blur   *Clip*   *Color Balance*   *Crop*

Crystallize   *Directional Blur*   *Edge Feather*   *Emboss*

Extract   *Fast Blur*   *Find Edges*   *Gaussian Blur*

Original image   *Horizontal Flip*   *Invert*   *Lens Distortion*

Lens Flare Lightning Mirror Mosaic

Noise Pinch Pointillize Posterize

Radial Blur Replicate Sharpen Sharpen Edges

Original image Shear Solarize Spherize

Texturize Tiles Tint Twirl

Vertical Flip Wave Wind ZigZag

Adjust effects

Auto Color, Auto Contrast, and Auto Levels effects

The Auto Color, Auto Contrast, and Auto Levels make quick global adjustments to a clip. Auto Color adjusts the contrast and color of a clip by neutralizing the midtones and clipping the white and black pixels. Auto Contrast adjusts the overall contrast and mixture of colors, without introducing or removing color casts. Auto Levels automatically corrects the highlights and shadows. Because Auto Levels adjusts each color channel individually, it may remove or introduce color casts.

Each effect has one or more of the following settings:

Temporal Smoothing Specifies the range of adjacent frames that Adobe Premiere Pro analyzes to determine the amount of correction needed for each frame, relative to its surrounding frames. For example, if you set Temporal Smoothing to 1 second, Adobe Premiere Pro analyzes the frames 1 second before the displayed frame to determine the appropriate adjustments. If you set Temporal Smoothing to 0, Adobe Premiere Pro analyzes each frame independently, without regard for surrounding frames. Temporal smoothing can result in smootherlooking corrections over time.

Scene Detect Specifies that Adobe Premiere Pro ignores scene changes when you have enabled Temporal Smoothing.

Snap Neutral Midtones (Auto Color only) Specifies that Adobe Premiere Pro finds an average nearly neutral (gray) color in an image and adjusts the gamma values of that color to make it neutral.

Black Clip and White Clip Specify how much the effect clips the shadows and highlights to the new extreme shadow (level 0) and highlight (level 255) colors in the image. Larger values produce an image with greater contrast.

Blend With Original Specifies the percentage of the effect to apply to the image.

Brightness & Contrast effect

The Brightness & Contrast effect adjusts the brightness and contrast of the entire clip. The value 0.0 indicates that no change is made.

Channel Mixer effect

The Channel Mixer modifies a color channel using a mix of the current color channels. Use this effect to make creative color adjustments not easily done with the other color adjustment tools. Create high-quality grayscale images by choosing the percentage contribution from each color channel, create high-quality sepia-tone or other tinted images, and swap or duplicate channels.

The Channel Mixer settings are the following:

Red, Green, Blue Specifies the contribution of the individual source channel to the output channel.

Constant Specifies the base amount of the input channel to be added to the output channel.

See also

Color Balance effect

The Color Balance effect changes the amount of red, green, and blue color in a clip. The center point of each slider is neutral and indicates no change. A setting of –100 removes all of the color; a setting of +100 intensifies the color. The clip's quality setting does not affect Color Balance. The Shadow/Midtone/Hilight channel Balance controls specify the amount of a channel's color in the darker, middle, and lighter color intensity ranges of a clip. Preserve Luminosity preserves the average brightness of the image while changing the color. This control maintains the tonal balance in the image.
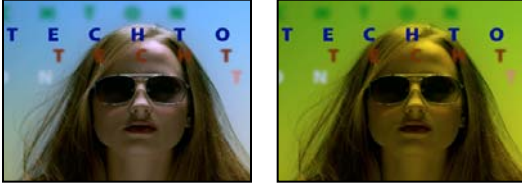
Color Balance effect: Original (left) and with variations of Color Balance effect applied (right)

Convolution Kernel effect

The Convolution Kernel effect changes the brightness values of each pixel in the clip according to a predefined mathematical operation known as a convolution. The Convolution Kernel Settings dialog box displays a grid that represents a pattern of pixel brightness multipliers, with the pixel being evaluated in the center of the grid. Use this effect to create custom blurs and embosses.

See also

"To adjust brightness using convolution" on page 276

Extract effect

The Extract effect removes colors from a video clip, creating a textured grayscale appearance. Control the clip's appearance by specifying the range of gray levels to convert to white or black.

See also

"To remove color in a clip" on page 275

Levels effect

The Levels effect manipulates the brightness and contrast of a clip. It combines the functions of the Color Balance, Gamma Correction, Brightness & Contrast, and Invert effects.

The Levels Settings dialog box displays a histogram of the current frame. The x-axis of the histogram represents brightness values from darkest (0) at the far left to brightest (255) at the far right; the y-axis represents the total number of pixels with that value.

See also

"To adjust luminance using levels" on page 268

Lighting Effects effect

The Lighting Effects effect applies lighting effects on a clip with up to five lights to introduce creative lighting effects. Lighting Effects lets you control lighting properties such as lighting type, direction, intensity, color, lighting center, and lighting spread. There is also a Bump Layer control to use textures or patterns from other footage to produce special lighting effects such as a 3D-like surface effect.

See also

"To use Lighting Effects" on page 277

Posterize effect

The Posterize effect specifies the number of tonal levels (or brightness values) for each channel in an image and maps pixels to the closest matching level. For example, if you choose two tonal levels in an RGB image, you get two tones for red, two tones for green, and two tones for blue. Values range from 2 to 255. Although the results of this effect are most evident when you reduce the number of gray levels in a grayscale image, Posterize also produces interesting effects in color images.

Use Level to adjust the number of tonal levels for each channel to which Posterize will map existing colors.

ProcAmp effect

The ProcAmp effect emulates the processing amplifier found on standard video equipment. This effect adjusts the brightness, contrast, hue, saturation, and split percent of a clip's image.

Shadow/Highlight effect

The Shadow/Highlight effect brightens shadowed subjects in an image and reduces the highlights in an image. This effect does not apply a global darkening or lightening of an image, but rather adjusts the shadows and highlights independently, based on the surrounding pixels. You can also adjust the overall contrast of an image. The default settings are optimized to fix images with backlighting problems.

The Shadow/Highlight effect has the following settings:

Auto Amounts Specifies that Adobe Premiere Pro automatically analyzes and corrects highlight and shadow problems stemming from backlighting issues. This option is selected by default. Deselect it to activate manual controls for shadow and highlight correction.

Shadow Amount Lightens the shadows in the image. This control is active only if you deselect Auto Amounts.

Highlight Amount Darkens the highlights in the image. This control is active only if you deselect Auto Amounts.

Temporal Smoothing Specifies the range of adjacent frames that Adobe Premiere Pro analyzes in order to determine the amount of correction needed for each frame, relative to its surrounding frames. For example, if you set Temporal Smoothing to 1 second, Adobe Premiere Pro analyzes the frames 1 second before the displayed frame to determine appropriate shadow and highlight adjustments. If you set Temporal Smoothing to 0, Adobe Premiere Pro analyzes each frame independently, without regard for surrounding frames. Temporal Smoothing can result in smoother-looking corrections over time. This control is active only if you select Auto Amounts.

Scene Detect Specifies that Adobe Premiere Pro ignores scene changes when you have enabled Temporal Smoothing.

Blend With Original Specifies the percentage of the effect to apply to the image.

Expand the More Options category to reveal the following controls:

Shadow Tonal Width and Highlight Tonal Width Specify the range of adjustable tones in the shadows and highlights. Lower values restrict the adjustable range to only the darkest and lightest regions, respectively. Higher values expand the adjustable range. These controls are useful for isolating regions to adjust. For example, to lighten a dark area without affecting the midtones, set a low Shadow Tonal Width value so that when you adjust the Shadow Amount, you are lightening only the darkest areas of an image.

Shadow Radius and Highlight Radius Specify the size (in pixels) of the area around a pixel that the effect uses to determine whether the pixel resides in a shadow or a highlight. Generally, this value should roughly equal the size of the subject of interest in your footage.

Color Correction Specifies the degree of color correction that the effect applies to the adjusted shadows and highlights. The higher the value, the more saturated the colors become. The more significant the correction that you make to the shadows and highlights, the greater the range of color correction available.

Note: If you want to change the color over the whole image, use the Hue/Saturation effect after applying the Shadow/Highlight effect.

Midtone Contrast Specifies the degree of contrast that the effect applies to the midtones. Higher values increase the contrast in the midtones alone, while concurrently darkening the shadows and lightening the highlights.

Black Clip and White Clip Specify how much the effect clips the shadows and highlights to the new extreme shadow (level 0) and highlight (level 255) colors in the image. Larger values produce an image with greater contrast.

Threshold effect

The Threshold effect lets you convert grayscale or color images to high-contrast, black-and-white images. Specify a certain level as a threshold; all pixels lighter than the threshold are converted to white and all pixels darker to black.

Threshold effect: Original image (left) and with variations of the Threshold effect applied (center and right)

Blur and Sharpen effects

Antialias effect

The Antialias effect blends the edges between areas of highly contrasting colors. When blended, colors create intermediate shades that make transitions between dark and light areas appear more gradual.

Camera Blur effect

The Camera Blur effect simulates an image leaving the focal range of the camera, blurring the clip. For example, by setting keyframes for the blur, you can simulate a subject coming into or going out of focus, or the accidental bumping of the camera. Drag the slider to specify a blur amount for the selected keyframe; higher values increase the blur.

Channel Blur effect

The Channel Blur effect blurs a clip's red, green, blue, or alpha channels individually. You can specify that the blur is horizontal, vertical, or both. Use this effect for glow effects or if you want a blur that does not become transparent near the edges of the clip. The Edge Behavior option describes how to treat the edges of a blurred image. If you deselect it, pixels outside of the image are transparent, which makes the edges of the blurred image semitransparent. Select the Repeat Edge Pixels option to repeat the pixels around the edges, preventing the edges from darkening and becoming more transparent.

Compound Blur effect

The Compound Blur effect blurs pixels in the selected clip based on the luminance values of a Blur Layer, also known as a blurring map. The Blur Layer can be any clip that contains pixels of different luminance values. It is overlaid on top of the selected clip, and the pixels of both clips are matched, one to one. Where the Blur Layer is black, no blurring occurs in the same location in the selected clip. The Blur Layer is used only as a map; it is not visible in the composition.
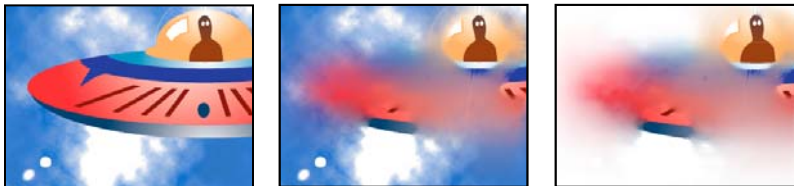
Compound Blur effect: Original (left), with Compound Blur applied (center), and with Compound Blur applied and the cloud layer made invisible (right)

This effect is useful for simulating smudges and fingerprints, or changes in visibility caused by atmospheric conditions such as smoke or heat, especially with animated blurring layers. Use the following controls:

Blur Layer Specifies the clip in the sequence to use as the blurring map. Bright values in the Blur Layer correspond to more blurring of the affected clip, while dark values correspond to less blurring.

Maximum Blur Specifies the maximum amount, in pixels, that any part of the affected clip can be blurred.

Stretch Map To Fit Stretches the Blur Layer to the dimensions of the clip to which it is applied; otherwise, it is centered.

Invert Blur Inverts the values, so areas that were previously more blurred are less blurred, and vice versa.

Directional Blur effect

The Directional Blur effect performs a directional blur on an image, giving a clip the illusion of motion.

The Directional Blur effect has the following settings:

Direction Specifies the direction of the blur. The blur is applied equally around a pixel's center; therefore, a setting of 180˚ and a setting of 0˚ look the same.

Blur Length Specifies how much to blur the image.

Fast Blur effect

Use the Fast Blur effect to specify how much to blur an image. You can specify that the blur is horizontal, vertical, or both. Fast Blur blurs areas more quickly than Gaussian Blur.

Gaussian Blur effect

The Gaussian Blur effect blurs and softens the image and eliminates noise. You can specify that the blur is horizontal, vertical, or both. (Gaussian refers to the bell-shaped curve that is generated by mapping the color values of the affected pixels.)

Gaussian Sharpen effect

The Gaussian Sharpen effect sharpens a clip by a large amount; the effect is similar to that of choosing the Sharpen effect several times. Keyframes cannot be applied to this effect.

Ghosting effect

The Ghosting effect overlays transparencies of the immediately preceding frames on the current frame. This effect can be useful, for example, when you want to show the motion path of a moving object, such as a bouncing ball. Keyframes cannot be applied to this effect.

Radial Blur effect

The Radial Blur effect produces a soft blur by simulating the effect of a zooming or rotating camera. Select the Spin blur method if you want to blur along concentric circular lines, as if rotating the camera. Select the Zoom blur method if you want to blur along lines radiating from the center. Drag the dot in the Blur Center box to change the origin of the blurring. You can also set the Amount of the blur from 1 to 100. With the Spin blur method, this value reflects the degree of rotation; with the Zoom blur method, this value reflects the intensity of the blur.

Sharpen effect

The Sharpen effect increases the contrast where color changes occur.

Sharpen Edges effect

The Sharpen Edges effect finds the areas in the clip where significant color changes occur, and sharpens them. Keyframes cannot be applied to this effect.

Unsharp Mask effect

The Unsharp Mask effect increases the contrast between colors that define an edge. Use the following controls:

Radius Specifies the depth of pixels that will be affected at an edge. If you specify a high value, more of the pixels surrounding the edge are adjusted for contrast. If you specify a low value, only pixels at the edge are adjusted.

Threshold Specifies a tolerance to define edges and prevent overall contrast adjustment that might generate noise or cause unexpected results. Values define the range of contrast allowed between adjacent pixels before contrast is adjusted. A lower value produces a more pronounced effect.

Unsharp Mask effect: Original (left) and with Amount set to 80, Radius set to 24, and Threshold set to 8 for the cloud layer (right)

Channel effects

3D Glasses effect

The 3D Glasses effect creates a single 3D image by combining a left and right 3D view. You can use images from 3D programs or stereoscopic cameras as sources for each view. The method you use to create the combined images dictates how you view them. For example, you can use the 3D Glasses effect to create an anaglyphic image, which contains two slightly different perspectives of the same subject that are tinted contrasting colors and superimposed on each other. To create an anaglyphic image, first combine views and tint each one a different color. Then, use 3D glasses that have either red and green lenses or red and blue lenses, to view the resulting image stereoscopically.

3D Glasses effect: Balanced Color Red Blue selected (left) and Interlaced Upper L Lower R selected (right)

To avoid problems with flipped views, keep the following guidelines in mind:

• Use the same vertical dimensions for the composition and source images. One pixel difference produces the same result as moving the position one pixel vertically.

• Make sure that the image's Position values are whole numbers (such as 240 instead of 239.7).

• If your left and right view images are interlaced, deinterlace them before applying the 3D Glasses effect. This avoids field mismatch.

• Because the 3D Glasses effect creates interlaced frames, do not select an interlace option in the Render Settings dialog box.

Adjust the following controls for the 3D Glasses effect:

Left View, Right View Specify the clip to use as the left or right view. You only need to apply 3D Glasses to one clip in a sequence. If you use a second clip, make sure that the two clips are the same size. The second clip does not need to be visible in the sequence.

Convergence Offset Specifies the amount that the two views are offset. Use this control to realign uncalibrated camera views of rendered material. Photos or images rendered from 3D programs are generally misaligned and require a negative Convergence Offset value.If the original footage was shot with correct convergence, there is no need to change this value. Keyframing this value may result in erratic animation.

Swap Left-Right Swaps the left and right views.

3D View Specifies the rendering mode the effect uses to combine the views.

• **Stereo Pair** Scales both images to fit side by side within the effect's bounding box. Select Swap Left-Right to create cross-eyed vision. Selecting Stereo Pair disables Convergence Offset.

• **Interlace Upper L Lower R** Takes the upper (first) field from the Left View, and the lower (second) field from the Right View, and combines them into a single or a sequence of interlaced frames. Use this option if you want to view the results with polarized or LCD shutter glasses. Select Swap Left-Right to switch fields.

• **Red Green LR** Tints the Right View red, and the Left View green using the luminance values of each image.

• **Red Blue LR** Tints the Right View red, and the Left View blue using the luminance values of each image.

• **Balanced Red Green LR** Performs the same operation as Red Green LR but also balances the colors to reduce shadows or ghosting effects caused by one view showing through the other. Setting a high value reduces the overall contrast.

• **Balanced Red Blue LR** Performs the same operation as Red Blue LR but also balances the colors in order to reduce shadows or ghosting effects.

• **Balanced Colored Red Blue** Converts the clip into a 3D view using the original clip's RGB channels. This option maintains the clip's original colors but may produce shadows and ghosting effects. To reduce these effects adjust the balance, or desaturate the image, and then apply the 3D Glasses effect. If you are using CG images, raise the black level of both views before applying the effect.

Balance Specifies the level of balance in a balanced 3D view option. Use this control to reduce shadows and ghost effects. The default balance that the 3D Glasses effect sets when you select the Balanced Colored Red Blue option is the ideal value: If you set Balance to 0.0, the 3D Glasses effect creates no 3D depth, and if you set Balance too high, the 3D Glasses effect produces a highly saturated output.

About red, blue, and green lenses

When you work with red and blue images, the blue color in glasses with red and blue lenses is actually cyan, not blue. Red and cyan are complementary colors, producing the best separation because they filter each other out more efficiently. When you work with red and green images, it may appear that the green is not as bright as the red. However, viewing the images with red and green lenses produces an even result because green has a higher luminance value than red.

About ghost effects

Ghost effects occur when the luminance values of one color exceed those of another color to such an extent that you can see the first color through the wrong lens of anaglyph glasses. For example, an excessive red luminance value becomes visible through the blue lens. If you adjust the Balance value, test the results on the final output media. If you set the Balance value too high, a reversed shadow may appear.

Arithmetic effect

The Arithmetic effect performs various simple mathematical operations on a clip's red, green, and blue channels.

Operator Specifies the mathematical operation to perform between the value you specify for each channel and the existing value of that channel for each pixel in the image:

• **And, Or, and Xor** Apply bitwise logical combinations of the specified value.

• **Add, Subtract, and Difference** Apply basic math functions using the specified value.

• **Max and Min** Select each pixel in the color channel that is respectively less or greater than the specified value and set it at the specified value.

• **Block Above and Block Below** Turn the channel off everywhere that it is respectively greater or less than the specified value

• **Slice** Turns the channel off where it is below the value specified and turns it on where it is above the specified value.

• **Multiply** Multiplies the value specified for each channel and the existing value of that channel for every pixel in the image. The resulting color is darker.

• **Screen** Multiplies the inverse of the value specified for each channel and the existing value of that channel for every pixel in the image. The resulting color is lighter.

Clip Result Values Prevents all functions from creating color values that exceed the valid range. If this option is not selected, some color values may wrap around from on to off, or vice versa.
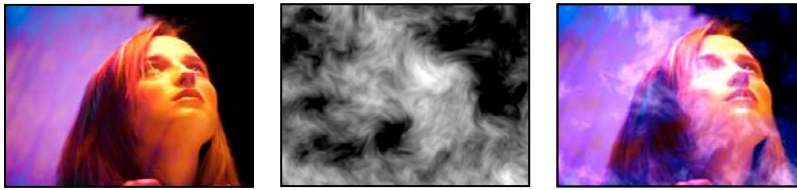
Arithmetic effect: Original images (left and center) and with Arithmetic effect applied (right)

Blend effect

The Blend effect blends two clips using one of five modes. A crossfade is a standard transition between two images: The original image fades out while the new image fades in. After you blend clips using this effect, disable the clip you selected from the Blend with Layer menu by selecting the clip and choosing Clip > Enable.

Calculations effect

The Calculations effect combines the channels of one clip with the channels of another.
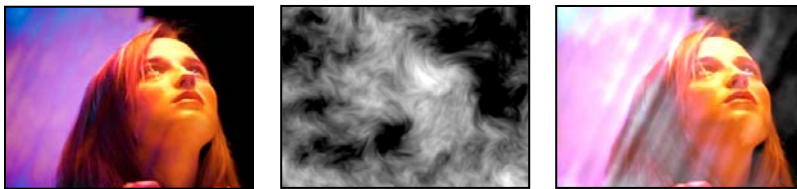
Calculations effect: Original images (left and center) and with Calculations effect applied (right)

Adjust the following controls for the Calculations effect:

Input Channel Specifies the channel to extract and blend with the original clip:

• **RGBA** Displays all channels normally.

• **Gray** Shows the luminance of the original RGBA image.

• **Red/Green/Blue/Alpha** Converts all channels to the value of the specified channel.

Invert Input Inverts the clip before the effect extracts the specified channel information.

Second Layer Specifies the video track with which Calculations blends the original clip.

Second Layer Channel Specifies the channel to be blended with the input channels.

Second Layer Opacity Specifies the transparency of the Second Layer.

Invert Second Layer Inverts the Second Layer before the effect extracts the specified channel information and calculates the blend.

Stretch Second Layer To Fit Stretches the Second Layer's edges to the original layer's edges before blending. If you don't select this control, the Calculations effect centers the second source layer in the original layer and crops it to fit the effect layer's boundaries.

Blending Mode Specifies the blend mode used for the blend of the original clip and Second Layer.

Preserve Transparency Ensures that the affected clip's alpha channel is not modified.

Cineon Converter effect

The Cineon Converter effect provides a high degree of control over color conversions of Cineon frames. In Adobe Premiere Pro, you can convert the color in a Cineon file using controls using the Cineon Converter effect. To use the Cineon Converter effect, import a Cineon file and add the clip to a sequence. You can then apply the Cineon Converter effect to the clip and precisely adjust the colors while interactively viewing the results in the Program monitor. Set keyframes to adjust for changes in tone over time—use keyframe interpolation and ease handles to precisely match the most irregular lighting changes, or leave the file in its default state and use the converter.

The 10 bits of data available in each Cineon channel make it easier to enhance an important range of tones while preserving overall tonal balance. By carefully specifying the range, you can create a version of the image that faithfully resembles the original.

Adjust the following controls for the Cineon Converter effect:

Conversion Type Specifies how the Cineon file is converted:

• **Log To Linear** Converts an 8-bit logarithmic non-Cineon clip that you plan to render as a Cineon clip.

• **Linear To Log** Converts a clip containing an 8-bit linear proxy of a Cineon file into an 8-bit logarithmic clip so that its display characteristics are consistent with the original Cineon file.

• **Log To Log** Detects an 8- or 10-bit logarithmic Cineon file when you plan to render it as an 8-bit logarithmic proxy.

10 Bit Black Point Specifies the black point (minimum density) for converting a 10-bit logarithmic Cineon clip.

Internal Black Point Specifies the black point used for the clip in Adobe Premiere Pro.

10 Bit White Point Specifies the white point (maximum density) for converting a 10-bit logarithmic Cineon clip.

Internal White Point Specifies the white point used for the layer in Adobe Premiere Pro.

Gamma Specifies the value of midtones.

Highlight Rolloff Specifies the rolloff value used to correct bright highlights.

To control the tonal balance of a Cineon file

1 Import the Cineon file into your project and then add it to a sequence.

2 Select the Cineon file clip in the Timeline panel.

3 From the Channel bin in the Effects panel, drag the Cineon Converter effect to the Video Effects area of the Effect Controls panel or to Cineon clip in the Timeline panel.

4 Choose an option from the Conversion Type menu.

5 Adjust the black point by dragging the 10 Bit Black Point slider right or left.

6 Adjust the white point by dragging the 10 Bit White Point slider left or right. (If adjusting the brightest areas makes the rest of the image appear too dark, use the Highlight Rolloff slider to adjust these bright highlights.)

7 Adjust midtones by dragging the Gamma slider to the left to darken midtones, or to the right to lighten midtones.

8 If highlights appear as white blotches, drag the Highlight Rolloff slider to the right until details are visible. An image with high contrast may require a high rolloff value.

Compound Arithmetic effect

The Compound Arithmetic effect mathematically combines the layer to which it is applied with another layer. The Compound Arithmetic effect is intended only to provide compatibility with projects created in earlier versions of After Effects that use the Compound Arithmetic effect. Using layer blending modes is usually more effective than using the Compound Arithmetic effect.
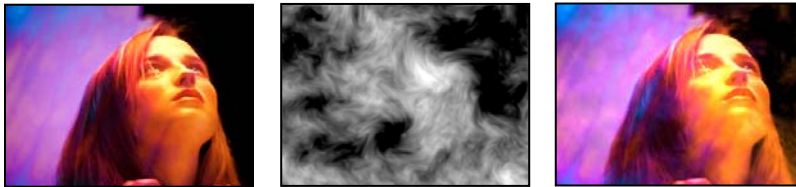
Compound Arithmetic effect: Original images (left and center) and with Compound Arithmetic effect applied (right)

Adjust the following controls for the Compound Arithmetic effect:

Second Source Layer Specifies the video track to use with the current layer in the given operation.

Operator Specifies the operation to perform between the two layers.

Operate On Channels Specifies the channels to which the effect is applied.

Overflow Behavior Specifies how pixel values that exceed the allowed range are treated:

• **Clip** Indicates that the values are limited to the allowed range.

• **Wrap** Indicates that values exceeding the allowed range wrap around from full on to full off, and vice versa.

• **Scale** Indicates that the maximum and minimum values are calculated and the results are stretched down from that full range to the range of allowable values.

Stretch Second Source To Fit Scales the second layer to match the size (width and height) of the current layer. If this option is deselected, the second layer is placed at its source's current size, aligned with the upper left corner of the source layer.

Blend With Original Adjusts the opacity of the second source layer so it blends with the original layer.

Invert effect

The Invert (video) effect inverts the color information of an image. The Invert effect has the following settings:

Channel Specifies which channel or channels to invert. Each group of items operates in a particular color space, inverting either the entire image in that color space or just a single channel.

• **RGB/Red/Green/Blue** Uses all of three additive color channels: red, green, and blue or an individual color channel to specify the inverted areas of the image.

• **HLS/Hue/Lightness/Saturation** Uses the three calculated color channels: hue, lightness, and saturation or one calculated color channel to specify the inverted areas of the image.

• **YIQ/Luminance/In Phase Chrominance/Quadrature Chrominance** Uses the NTSC luminance and chrominance color space, where Y is the luminance signal, I is the in-phase chrominance signal, and Q is the quadrature chrominance signals or the individual components of the color space to specify the inverted areas of the image.

• **Alpha** Inverts the alpha channel of the image. Alpha is not a color space.

Blend With Original Combines the inverted image with the original. You can apply a fade to the inverted image.

Set Matte effect

The Set Matte effect replaces the alpha channel (matte) of a clip with a channel from a clip in a different video track. This creates traveling matte effects.

Note: The Set Matte effect was originally from After Effects and intended only to provide compatibility with projects created in earlier versions of After Effects that use the Set Matte effect.
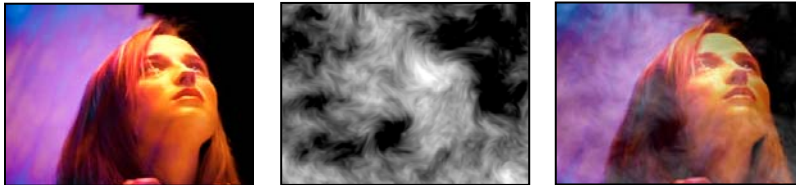
Set Matte effect: Original images (left and center) and with Set Matte effect applied (right)

To create a traveling matte using the Set Matte effect, set up a sequence with two overlapping clips on different video tracks. Apply the Set Matte effect to one of the clips and specify which clip provides the replacement matte. Although you can use Set Matte for a traveling matte, it is easier and faster to create traveling mattes by using the Track Matte effect.

Adjust the following controls for the Set Matte effect:

Take Matte From Layer Specifies the video track containing the clip to use as the replacement matte. You can specify any video track in the sequence.

Use For Matte Specifies the channel of the specified clip to use for the matte.

Invert Matte Inverts the transparency values of the matte.

Stretch Matte To Fit Scales the selected clip to match the size of the current clip. If Stretch Matte to Fit is deselected, the clip designated as the matte is centered in the first clip.

Composite Matte With Original Composites the new matte with the current clip, rather than replacing it. The resulting matte lets the image show through only where the current matte and the new matte both have some opacity.

Premultiply Matte Layer Premultiplies the new matte with the current clip.

Solid Composite effect

The Solid Composite effect offers a quick way to create a composite of a solid color behind the original source clip. You can control the opacity of the source clip, control the opacity of the solid, and apply blend modes all within the effect's controls.
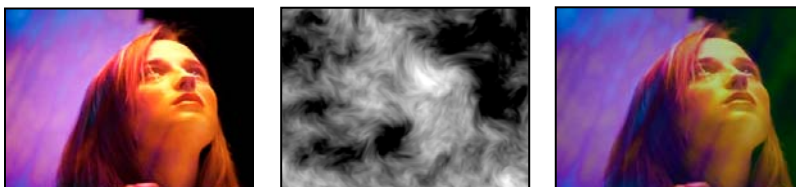
Solid Composite effect: Original images (left and center) and with Solid Composite effect applied (right)

Adjust the following controls for the Solid Composite effect:

Source Opacity Specifies the transparency of the source clip.

Color Specifies the hue of the solid color.

Opacity Specifies the solid color to composite with the source clip.

Blending Mode Specifies the blend mode the effect uses to combine the original clip and the solid color.

Color Correction effects

Fast Color Corrector effect

The Fast Color Corrector effect adjusts a clip's color using hue and saturation controls. The effect also has levels controls for adjusting intensity levels of image shadows, midtones, and highlights. This effect is recommended for making simple color corrections that preview quickly in the Program monitor.

The Fast Color Corrector effect has the following controls:

Output Lets you view adjustments in the Program monitor as the final results (Composite), tonal value adjustments (Luma), or display of the alpha matte (Mask).

Show Split View Displays the left or upper part of the image as the corrected view and the right or lower part of the image as the uncorrected view.

Layout Determines whether the Split View images are side by side (Horizontal) or above and below (Vertical).

Split View Percent Adjusts the size of the corrected view. The default is 50%.

White Point Assigns a white balance to an image using the Eyedropper tool to sample a target color in the image or anywhere on your monitor's desktop. You can also click the color swatch to open the Adobe Color Picker and select a color to define the white balance.

Hue Balance And Angle Controls hue and saturation adjustments using a color wheel. A circular thumb moves about the center of wheel and controls the hue (UV) translation. A perpendicular handle on the thumb controls balance magnitude, which affects the relative coarseness or fineness of the control. The outer ring of the wheel controls hue rotation.

Adjustments to the Hue Balance And Angle can be viewed in the vectorscope.

Hue Angle Controls the hue rotation. The default value is 0. Negative values rotate the color wheel to the left and positive values rotate the color wheel to the right.

Balance Magnitude Controls the amount of color balance correction as determined by the Balance Angle.

Balance Gain Adjusts brightness values by multiplication so that lighter pixels are affected more than darker pixels.

Balance Angle Controls the hue translation.

Saturation Adjusts the image's color saturation. The default value is 100, which doesn't affect the colors. Values less than 100 decrease saturation, with 0 completely removing any color. Values greater than 100 produce more saturated colors.

Auto Black Level Raises the black levels in a clip so the darkest levels are above 7.5 IRE. A portion of the shadows is clipped and the intermediate pixel values are redistributed proportionately. As a result, using Auto Black Level lightens the shadows in an image.

Auto Contrast Applies both the Auto Black Level and Auto White Level simultaneously. This makes the highlights appear darker and shadows appear lighter.

Auto White Level Lowers the white levels in a clip so the lightest levels do not exceed 100 IRE. A portion of the highlights is clipped and the intermediate pixel values are redistributed proportionately. As a result, using Auto White Level darkens the highlights in an image.

Black Level, Gray Level, White Level Sets the levels for darkest shadow, midtone gray, and lightest highlight using the different Eyedropper tools to sample a target color in the image or anywhere on your monitor's desktop. You can also click the color swatch to open the Adobe Color Picker and select a color to define the black, midtone gray, and white.

Input Levels The outer two Input Levels sliders map the black point and white point to the settings of the Output sliders. The middle Input slider adjusts the gamma in the image. It moves the midtone and changes the intensity values of the middle range of gray tones without dramatically altering the highlights and shadows.

Output Levels Map the black point and white point input level sliders to specified values. By default, the Output sliders are at level 0, where the shadows are completely black, and level 255, where the highlights are completely white. So, in the default position for the Output sliders, moving the black input slider maps the shadow value to level 0, and moving the white point slider maps the highlight value to level 255. The remaining levels are redistributed between levels 0 and 255. This redistribution increases the tonal range of the image, in effect increasing the overall contrast of the image.

Input Black, Input Gray, Input White Adjust the black point, midtone, and white point input levels for the highlights, midtones, or shadows.

Output Black, Output White Adjust the mapped output levels for the input black and input white levels for the highlights, midtones, or shadows.

See also

"To apply the Color Correction effects" on page 262

"Color balance, angle, and saturation controls" on page 265

"Adjusting color and luminance" on page 260

Luma Corrector effect

The Luma Corrector effect lets you adjust the brightness and contrast in the highlights, midtones, and shadows of a clip. You can also specify the color range to be corrected by using the Secondary Color Correction controls.

The Luma Corrector effect has the following controls:

Output Lets you view adjustments in the Program monitor as the final results (Composite) or tonal value adjustments (Luma), display of the alpha matte (Mask) or a tritone representation of where the shadows, midtones, and highlights fall (Tonal Range).

Show Split View Displays the left or upper part of the image as the corrected view and the right or lower part of the image as the uncorrected view.

Layout Determines whether the Split View images are side by side (Horizontal) or above and below (Vertical).

Split View Percent Adjusts the size of the corrected view. The default is 50%.

Tonal Range Definition Defines the tonal range of the shadows and highlights using threshold and threshold with falloff (softness) controls. Click the triangle to display the Tonal Range Definition controls. Drag a square slider to adjust the threshold values. Drag a triangle slider to adjust the softness (feathering) value.

Note: Choose Tonal Range from the Output menu to view the different tonal ranges as you adjust the Tonal Range Definition sliders.

Tonal Range Specifies whether the luminance adjustments are applied to the entire image (Master), the highlights only, midtones only, or shadows only.

Brightness Adjusts the black level in a clip. Use this control so that the black picture content in your clip appears as black.

Contrast Affects the image's contrast by adjusting the gain from the clip's original contrast value.

Contrast Level Sets the clip's original contrast value.

Gamma Adjusts the image's midtone values without affecting black and white levels. This causes changes in contrast, much like changing the shape the curve in the Luma Curve effect. Use this control to adjust images that are too dark or too light, without distorting shadows and highlights.

Pedestal Adjusts an image by adding a fixed offset to the image's pixel values. Use this control with the Gain control to increase an image's overall brightness.

Gain Affects the overall contrast ratio of an image by adjusting brightness values by multiplication. The lighter pixels are affected more than darker pixels.

Secondary Color Correction Specifies the color range to be corrected by the effect. You can define the color by hue, saturation, and luminance. Click the triangle to access the controls.

Note: Choose Mask from the Output menu to view the areas of the image that are selected as you define the color range.

Center Defines the central color in the range that you're specifying. Select the Eyedropper tool and click anywhere on your screen to specify a color, which is displayed in the color swatch. Use the + Eyedropper tool to extend the color range, and use the – Eyedropper tool to subtract from the color range. You can also click the swatch to open the Adobe Color Picker and select the center color.

Hue, Saturation, and Luma Specify the color range to be corrected by hue, saturation, or luminance. Click the triangle next to the option name to access the threshold and softness (feathering) controls to define the hue, saturation, or luminance range.

Soften Makes boundaries of the specified area more diffuse, blending the correction more with the original image. A higher value makes the increases the softness.

Edge Thinning Makes the specified area more sharply defined. The correction becomes more pronounced. A higher value increases the edge definition of the specified area.

Invert Limit Color Corrects all colors except for the color range that you specified with the Secondary Color Correction settings.

See also

"Adjusting color and luminance" on page 260

Luma Curve effect

The Luma Curve effect adjusts the brightness and contrast of a clip using a curve adjustment. You can also specify the color range to be corrected by using the Secondary Color Correction controls.

The Luma Curve effect has the following controls:

Output Lets you view adjustments in the Program monitor as the final results (Composite) or tonal value adjustments (Luma), or display of the alpha matte (Mask).

Show Split View Displays the left or upper part of the image as the corrected view and the right or lower part of the image as the uncorrected view.

Layout Determines whether the Split View images are side by side (Horizontal) or above and below (Vertical).

Split View Percent Adjusts the size of the corrected view. The default is 50%.

Luma Alters the brightness and contrast of the clip when you change the shape of the curve. Bowing the curve upward lightens the clip and bowing the curve downward darkens the clip. The steeper sections of the curve represent portions of the image with greater contrast. Click to add a point to the curve and drag to manipulate the shape. You can adjust up to a maximum of 16 points on the curve. To delete a point, drag it off the graph.

Secondary Color Correction Specifies the color range to be corrected by the effect. You can define the color by hue, saturation, and luminance. Click the triangle to access the controls.

Note: Choose Mask from the Output menu to view the areas of the image that are selected as you define the color range.

Center Defines the central color in the range that you're specifying. Select the Eyedropper tool and click anywhere on your screen to specify a color, which is displayed in the color swatch. Use the + Eyedropper tool to extend the color range, and use the - Eyedropper tool to subtract from the color range. You can also click the swatch to open the Adobe Color Picker and select the center color.

Hue, Saturation, and Luma Specify the color range to be corrected by hue, saturation, or luminance. Click the triangle next to the option name to access the threshold and softness (feathering) controls to define the hue, saturation, or luminance range.

Soften Makes boundaries of the specified area more diffuse, blending the correction more with the original image. A higher value makes the increases the softness.

Edge Thinning Makes the specified area more sharply defined. The correction becomes more pronounced. A higher value increases the edge definition of the specified area.

Invert Limit Color Corrects all colors except for the color range that you specified with the Secondary Color Correction settings.

See also

"To adjust color and luminance using curves" on page 267

"Adjusting color and luminance" on page 260

RGB Color Corrector effect

The RGB Color Corrector effect adjusts the color in a clip by applying adjustments to the tonal ranges that you define for the highlights, midtones, and shadows. The effect lets you make tonal adjustments to each color channel individually. You can also specify the color range to be corrected by using the Secondary Color Correction controls.

The RGB Color Corrector has the following controls:

Output Lets you view adjustments in the Program monitor as the final results (Composite), tonal value adjustments (Luma), display of the alpha matte (Mask), or a tri-tone representation of where the shadows, midtones, and highlights fall (Tonal Range).

Show Split View Displays the left or upper part of the image as the corrected view and the right or lower part of the image as the uncorrected view.

Layout Determines whether the Split View images are side by side (Horizontal) or above and below (Vertical).

Split View Percentage Adjusts the size of the corrected view. The default is 50%.

Tonal Range Definition Defines the tonal range of the shadows and highlights using threshold and falloff controls:

• **Shadow Threshold** Determines the shadow's tonal range.

• **Shadow Softness** Determines the shadow's tonal range with falloff.

• **Highlight Threshold** Determines the highlight's tonal range.

• **Highlight Softness** Determines the highlight's tonal range with falloff.

> *Choose Tonal Range from the Output pop-up menu to view the highlights, midtones, and shadows as you adjust the Tonal Range Definition controls.*

Tonal Range Specifies whether the color correction is applied to the entire image (Master), the highlights only, midtones only, or shadows only.

Gamma Adjusts the image's midtone values without affecting black and white levels. Use this control to adjust images that are too dark or too light, without distorting shadows and highlights.

Pedestal Adjusts an image by adding a fixed offset to the image's pixel values. Use this control with the Gain control to increase an image's overall brightness.

Gain Affects the overall contrast ratio of an image by adjusting brightness values by multiplication. The lighter pixels are affected more than darker pixels.

RGB Lets you adjust the midtone values, contrast, and brightness of each color channel individually. Click the triangle to expand the options for setting the gamma, pedestal, and gain of each channel.

• **Red Gamma, Green Gamma, and Blue Gamma** Adjusts the red, green, or blue channel's midtone values without affecting black and white levels.

• **Red Pedestal, Green Pedestal, and Blue Pedestal** Adjusts the tonal values in the red, green, or blue channel by adding a fixed offset to the channel's pixel values. Use this control with the Gain control to increase the channel's overall brightness.

• **Red Gain, Green Gain, and Blue Gain** Adjusts the red, green, or blue channel's brightness values by multiplication so that lighter pixels are affected more than darker pixels.

Secondary Color Correction Specifies the color range to be corrected by the effect. You can define the color by hue, saturation, and luminance. Click the triangle to access the controls.

Note: Choose Mask from the Output menu to view the areas of the image that are selected as you define the color range.

Center Defines the central color in the range that you're specifying. Select the Eyedropper tool and click anywhere on your screen to specify a color, which is displayed in the color swatch. Use the + Eyedropper tool to extend the color range, and use the – Eyedropper tool to subtract from the color range. You can also click the swatch to open the Adobe Color Picker and select the center color.

Hue, Saturation, and Luma Specify the color range to be corrected by hue, saturation, or luminance. Click the triangle next to the option name to access the threshold and softness (feathering) controls to define the hue, saturation, or luminance range.

Soften Makes boundaries of the specified area more diffuse, blending the correction more with the original image. A higher value makes the increases the softness.

Edge Thinning Makes the specified area more sharply defined. The correction becomes more pronounced. A higher value increases the edge definition of the specified area.

Invert Limit Color Corrects all colors except for the color range that you specified with the Secondary Color Correction settings.

See also

"To apply the Color Correction effects" on page 262

"Adjusting color and luminance" on page 260

RGB Curves effect

The RGB Curves effect adjusts a clip's color using curve adjustments for each color channel. Each curve lets you adjust up to 16 different points throughout an image's tonal range. You can also specify the color range to be corrected by using the Secondary Color Correction controls.

The RGB Curves effect has the following controls:

Output Lets you view adjustments in the Program monitor as the final results (Composite), tonal value adjustments (Luma), display of the alpha matte (Mask), or a tri-tone representation of the shadows, midtones and highlights (Tonal Range).

Show Split View Displays one part of the image as the corrected view and the other part of the image as the uncorrected view.

Layout Determines whether the Split View images are side by side (Horizontal) or above and below (Vertical).

Split View Percentage Adjusts the size of the corrected view. The default is 50%.

Master Alters the brightness and contrast of all channels when you change the shape of the curve. Bowing the curve upward lightens the clip and bowing the curve downward darkens the clip. The steeper sections of the curve represent portions of the image with greater contrast. Click to add a point to the curve and drag to manipulate the shape. You can add a maximum of 16 points to the curve. To delete a point, drag it off the graph.

Red, Green, and Blue Alters the brightness and contrast of the red, green, or blue channel when you change the shape of the curve. Bowing the curve upward lightens the channel and bowing the curve downward darkens the channel. The steeper sections of the curve represent portions of the channel with greater contrast. Click to add a point to the curve and drag to manipulate the shape. You can adjust up to a maximum of 16 points on the curve. To delete a point, drag it off the graph.

Secondary Color Correction Specifies the color range to be corrected by the effect. You can define the color by hue, saturation, and luminance. Click the triangle to access the controls.

Note: Choose Mask from the Output menu to view the areas of the image that are selected as you define the color range.

Center Defines the central color in the range that you're specifying. Select the Eyedropper tool and click anywhere on your screen to specify a color, which is displayed in the color swatch. Use the + Eyedropper tool to extend the color range, and use the – Eyedropper tool to subtract from the color range. You can also click the swatch to open the Adobe Color Picker and select the center color.

Hue, Saturation, and Luma Specify the color range to be corrected by hue, saturation, or luminance. Click the triangle next to the option name to access the threshold and softness (feathering) controls to define the hue, saturation, or luminance range.

Soften Makes boundaries of the specified area more diffuse, blending the correction more with the original image. A higher value makes the increases the softness.

Edge Thinning Makes the specified area more sharply defined. The correction becomes more pronounced. A higher value increases the edge definition of the specified area.

Invert Limit Color Corrects all colors except for the color range that you specified with the Secondary Color Correction settings.

See also

"To adjust color and luminance using curves" on page 267

"Adjusting color and luminance" on page 260

Three-Way Color Corrector effect

The Three-Way Color Corrector effect lets you make subtle corrections by adjusting a clip's hue, saturation, and brightness for the shadow, midtones, and highlights. The effect has a histogram that displays the image's luminance. You can further refine your adjustments by specifying the color range to be corrected by using the Secondary Color Correction controls.

The Three-Way Color Corrector effect has the following controls:

Output Lets you view adjustments in the Program monitor as the final results (Composite), tonal value adjustments (Luma), display of the alpha matte (Mask), or a tri-tone representation of the shadows, midtones and highlights (Tonal Range).

Show Split View Displays one part of the image as the corrected view and the other part of the image as the uncorrected view.

Layout Determines whether the Split View images are side by side (Horizontal) or above and below (Vertical).

Split View Percentage Adjusts the size of the corrected view. The default is 50%.

Black Balance, Gray Balance, White Balance Assigns a black, midtone gray, or white balance to a clip. Use the different Eyedropper tools to sample a target color in the image, or choosing a color from the Adobe Color Picker.

Tonal Range Definition Defines the tonal range of the shadows, midtones, and highlights in a clip. Drag the square sliders to adjust the threshold values. Drag the triangle sliders to adjust the amount of softness (feathering).

Choose Tonal Range from the Output pop-up menu to view the highlights, midtones, and shadows as you adjust the Tonal Range Definition controls.

Shadow Threshold, Shadow Softness, Highlight Threshold, Highlight Softness Determine the threshold and softness of the shadows, midtones, and highlights in a clip. Enter values or click the triangle next to the option name and drag the slider.

Tonal Range Chooses the tonal range adjusted by the Hue Angle, Balance Magnitude, Balance Gain, Balance Angle, Saturation, and Levels controls. Highlights is the default. Other options in the pop-up menu are Master, Shadows, and Midtones.

Note: You can still adjust all three tonal ranges using the three color wheels even after you choose from the Tonal Range pop-up menu.

Three-Way Hue Balance and Angle Controls hue and saturation adjustments using three color wheels for the shadows (left wheel), midtones (middle wheel), and highlights (right wheel). A single master wheel appears when Master is chosen from the Tonal Range pop-up menu. A circular thumb moves about the center of the wheel and controls the hue (UV) translation. A perpendicular handle on the thumb controls the balance magnitude, which affects the relative coarseness or fineness of the control. The outer ring of the wheel controls hue rotation.

Highlights/Midtones/Shadows Hue Angle Controls the hue rotation in the highlights, midtones, or shadows. The default value is 0. Negative values rotate the color wheel to the left and positive values rotate the color wheel to the right.

Highlights/Midtones/Shadows Balance Magnitude Controls the amount of color balance correction as determined by the Balance Angle. The adjustment can be applied to highlights, midtones, and shadows.

Highlight/Midtones/Shadows Balance Gain Adjusts brightness values by multiplication so that lighter pixels are affected more than darker pixels. The adjustment can be applied to highlights, midtones, and shadows.

Highlights/Midtones/Shadows Balance Angle Controls the hue translation in the highlights, midtones, or shadows.

Highlights/Midtones/Shadows Saturation Adjusts the color saturation in the highlights, midtones, or shadows. The default value is 100, which doesn't affect the colors. Values less than 100 decrease saturation, with 0 completely removing any color. Values greater than 100 produce more saturated colors.

Auto Black Level Raises the black levels in a clip so the darkest levels are above 7.5 IRE. A portion of the shadows is clipped and the intermediate pixel values are redistributed proportionately. As a result, using Auto Black Level lightens the shadows in an image.

Auto Contrast Applies both the Auto Black Level and Auto White Level simultaneously. This makes the highlights appear darker and shadows appear lighter.

Auto White Level Lowers the white levels in a clip so the lightest levels do not exceed 100 IRE. A portion of the highlights is clipped and the intermediate pixel values are redistributed proportionately. As a result, using Auto White Level darkens the highlights in an image.

Black Level, Gray Level, White Level Sets the levels for darkest shadow, midtone gray, and lightest highlight using the different Eyedropper tools to sample a target color in the image or anywhere on your monitor's desktop. You can also click the color swatch to open the Adobe Color Picker and select a color to define the black, midtone gray, and white.

Input Levels The outer two Input Levels sliders map the black point and white point to the settings of the Output sliders. The middle Input slider adjusts the gamma in the image. It moves the midtone and changes the intensity values of the middle range of gray tones without dramatically altering the highlights and shadows.

Output Levels Map the black point and white point input level sliders to specified values. By default, the Output sliders are at level 0, where the shadows are completely black, and level 255, where the highlights are completely white. So, in the default position for the Output sliders, moving the black input slider maps the shadow value to level 0, and moving the white point slider maps the highlight value to level 255. The remaining levels are redistributed between levels 0 and 255. This redistribution increases the tonal range of the image, in effect increasing the overall contrast of the image.

Input Black, Input Gray, Input White Adjust the black point, midtone, and white point input levels for the highlights, midtones, or shadows.

Output Black, Output White Adjust the mapped output levels for the input black and input white levels for the highlights, midtones, or shadows.

Secondary Color Correction Specifies the color range to be corrected by the effect. You can define the color by hue, saturation, and luminance. Click the triangle to access the controls.

Note: Choose Mask from the Output menu to view the areas of the image that are selected as you define the color range.

Center Defines the central color in the range that you're specifying. Select the Eyedropper tool and click anywhere on your screen to specify a color, which is displayed in the color swatch. Use the + Eyedropper tool to extend the color range, and use the – Eyedropper tool to subtract from the color range. You can also click the swatch to open the Adobe Color Picker and select the center color.

Hue, Saturation, and Luma Specify the color range to be corrected by hue, saturation, or luminance. Click the triangle next to the option name to access the threshold and softness (feathering) controls to define the hue, saturation, or luminance range.

Soften Makes boundaries of the specified area more diffuse, blending the correction more with the original image. A higher value makes the increases the softness.

Edge Thinning Makes the specified area more sharply defined. The correction becomes more pronounced. A higher value increases the edge definition of the specified area.

Invert Limit Color Corrects all colors except for the color range that you specified with the Secondary Color Correction settings.

See also

"To apply the Color Correction effects" on page 262

"Adjusting color and luminance" on page 260

Video Limiter effect

The Video Limiter effect lets you limit the luminance and color in the clip so that they fall within parameters that you define. This is useful for preserving as the video as much as possible while making its signal fall within the broadcasting limits.

Show Split View Displays one part of the image as the corrected view and the other part of the image as the uncorrected view.

Layout Determines whether the Split View images are side by side (Horizontal) or above and below (Vertical).

Split View Percentage Adjusts the size of the corrected view. The default is 50%.

Reduction Axis Lets you set the limits defining the range of luminance (Luma), color (Chroma), both color and luminance (Chroma and Luma), or the overall video signal (Smart Limit). The Min and Max controls available depend on the Reduction Axis option you choose.

Luma Min Specifies the darkest level in an image.

Luma Max Specifies the brightest level in an image.

Chroma Min Specifies the lowest saturation for the colors in an image.

Chroma Max Specifies the maximum saturation for the colors in an image.

Signal Min Specifies the minimum video signal including both brightness and saturation.

Signal Max Specifies the maximum video signal including both brightness and saturation.

Reduction Method Lets you compress specific tonal ranges to preserve detail in important tonal ranges (Highlights Compression, Midtones Compression, Shadows Compression, or Highlights and Shadows Compression) or compress all tonal ranges (Compress All). Compress All is the default.

Tonal Range Definition Defines the tonal range of the shadows, midtones, and highlights in a clip. Drag the square sliders to adjust the threshold values. Drag the triangle sliders to adjust the amount of softness (feathering).

Shadow Threshold, Shadow Softness, Highlight Threshold, Highlight Softness Determine the threshold and softness of the shadows, midtones, and highlights in a clip. Enter values or click the triangle next to the option name and drag the slider.

See also

"Adjusting color and luminance" on page 260

Distort effects

Bend effect

The Bend effect distorts a clip by producing the appearance of a wave traveling both vertically and horizontally through the clip. You can produce a number of different wave shapes at various sizes and rates.

The Bend effect has the following settings:

Direction Specifies the direction of the wave:

• **In** Specifies that waves move toward the center of the clip.

• **Out** Specifies that waves start in the center and move to the edge of the clip.

Wave Specifies the shape of the wave. Choose from a sine wave, circle, triangle, or square.

Intensity Specifies the height of the wave.

Rate Specifies the frequency of the wave. To produce a wave only vertically or horizontally, move the *Rate* slider all the way to the left for the direction you do not want.

Width Specifies the wave width.

Corner Pin effect

The Corner Pin effect distorts an image by changing the position of each of its four corners. Use it to stretch, shrink, skew, or twist an image, or to simulate perspective or movement that pivots from the edge of a clip, such as a door opening.

Note: You can directly manipulate the Corner Pin effect properties in the Program monitor when you click the Transform icon *next to Corner Pin in the Effect Controls panel. Drag one of the four corner handles to adjust the properties.*

Corner Pin effect: Original image (left), corner moved (center), and final image (right)

Lens Distortion effect

The Lens Distortion effect simulates a distorted lens through which the clip is viewed.

The Lens Distortion effect has the following settings:

Curvature Changes the curvature of the lens. Specify a negative value to make the image concave, or a positive value to make the image convex.

Vertical and Horizontal Decentering Displace the focal point of the lens, making the image bend and smear. At extreme settings, the image wraps in on itself.

Vertical and Horizontal Prism FX Create a result similar to vertical and horizontal decentering, except that at extreme values the image doesn't wrap in on itself.

Fill Color Specifies the background color.

Fill Alpha Channel Makes the background transparent so that underlying tracks are visible. In the Effect Controls panel, click Setup to access this option.

Magnify effect

The Magnify effect enlarges a selected area of a clip. This effect can act like a magnifying glass placed over an area of the image, or you can use it to scale the entire image far beyond 100% while maintaining resolution.

Magnify effect: Original image (left) and with variations of Magnify effect applied (center and right)

Adjust the following controls for the Magnify effect:

Shape Specifies the shape of the magnified area.

Center Specifies the center point of the magnified area.

Magnification Specifies the percentage of magnification (or scale) of the area you select. The values represent the percentage of the scale.

Link Specifies how the effect links the Size, Magnification, and Feather amounts so that they increase or decrease proportionally. Setting the Link control to any setting except None disables the Resize Layer option.

• **None** Specifies that the Size, Magnification, and Feather controls operate separately.

• **Size To Magnification** Specifies that the size of the magnified area increases or decreases proportionally in relation to the magnification adjustment.

• **Size & Feather To Magnification** Specifies that the size and edge feather of the magnified area increase or decrease proportionally in relation to the magnification adjustment.

Size Specifies the size of the magnified area, in pixels. (Setting the size larger than your original source layer may expand the magnified area outside the composition frame, depending upon the location of your center point. However, the effect still retains the image resolution.)

Feather Specifies the amount of feather, in pixels, that the effect applies to the edge of the magnified area. Higher values soften the edge of the magnified area, and blends the edge with the layer behind it. Lower values sharpen the edge of the magnified area.

Opacity Specifies the transparency of the magnified area. The Opacity value for the effect layer in the Timeline window represents the 100% setting of this control.

Scaling Specifies the type of scaling the effect uses to magnify an image:

• **Standard** Uses standard scaling. This method maintains sharpness in the image but produces pixelated edges at higher values.

• **Soft** Uses spline algorithms. If you scale the image beyond 100%, Soft reduces edge pixelation and maintains image quality. Soft works well at large magnification amounts.

• **Scatter** Creates scatter or noise in the image as the image enlarges.

Blending Mode Specifies the blend mode that the effect uses to combine the magnified area with the original clip. The None option displays transparent pixels around the magnified area.

Resize Layer If Resize Layer is selected, the effect uses only the boundaries as the edge of the clip when the magnified area extends beyond the original clip's boundaries. If Resize Layer is deselected, any area of the image outside the original clip's bounding box is cropped by the clip's boundaries.

Mirror effect

The Mirror effect splits the image along a line and reflects one side onto the other. The reflection angle determines which side is reflected and where the reflection appears. You can make the line and reflection angle change over time.

The Mirror effect has the following settings:

Reflection Center Specifies the position of the line. Click the box and drag the resulting cross hair to the spot in the image where you want to place the line.

Reflection Angle Specifies the angle of reflection, and therefore where the reflection appears on the clip. An angle of 0˚ reflects the left side on the right. An angle of 180˚ reflects the right side on the left. An angle of 90˚ reflects the top on the bottom. An angle of 270˚ reflects the bottom on the top.

Note: You can directly manipulate the Mirror effect in the Program monitor. Click the Transform icon ⊡⊾ and then drag the adjustment handle.

Offset effect

The Offset effect pans the image within a clip. Visual information pushed off one side of the image appears on the opposite side. At Best quality, the offset is performed with subpixel precision.

Shift Center To Specifies the new position of the original image's center point.

Blend With Original Specifies the amount by which the offset image is blended with the original image.

Offset effect: Original image (left) and with variations of the Offset effect applied (center and right)

Polar Coordinates effect

The Polar Coordinates effect distorts a clip by moving each pixel in the clip's x,y coordinate system to the corresponding position in the polar coordinate system, or the reverse. This effect produces unusual and surprising distortions that can vary greatly depending on the image and the controls you select. The standard coordinate system specifies points by measuring the horizontal distance (x-axis) and the vertical distance (y-axis) from the origin. The polar coordinate system specifies points by measuring the length of a radius from the origin and its angle from the x-axis.

The Polar Coordinates effect has the following settings:

Interpolation Specifies the amount of distortion. At 0% there is no distortion.

Rect To Polar Moves pixels by using the standard *x,y* coordinates from each pixel as polar coordinates. For example, an *x,y* coordinate of 2,3 becomes a polar coordinate with a radius of 2 and an angle of 3 degrees. Horizontal lines distort into circles and vertical lines into radial lines.

Polar To Rect Moves pixels by using the polar coordinates from each pixel as the standard *x,y* coordinates. For example, a polar coordinate of radius 10 and 45˚ becomes an *x,y* coordinate of 10,45.

Note: The Rect To Polar and the Polar To Rect settings are in the Type Of Conversion pop-up menu.

Ripple effect

The Ripple effect produces an undulating pattern on a clip, like ripples on the surface of a pond. The shape, severity, and direction of the ripple pattern are adjustable, as well as the background color.

Spherize effect

The Spherize effect wraps a clip around a spherical shape and is useful for giving objects and text a three-dimensional effect. This effect has options for adjusting the size of the sphere.

Transform effect

The Transform effect applies two-dimensional geometric transformations to a clip. Use the Transform effect to skew a clip along any axis. Apply the Transform effect instead of using a clip's Fixed effects if you want to render anchor point, position, scale, or opacity settings before other Standard effects are rendered.

The Transform effect has the following settings:

Anchor Point Specifies the point, in an *x,y* coordinate, around which the image will be scaled or skewed.

Position Specifies the location, in an *x,y* coordinate, of the center (anchor point) of the clip.

Scale Height Scales height up or down as a percentage of the source clip height.

Scale Width Scales width up or down as a percentage of the source clip width.

Uniform Scale Scales height and width proportionately.

Skew Specifies skew amount.

Skew Axis The axis on which the skew is based. Changing the axis has no effect if Skew is 0.

Rotation Specifies the number of complete rotations and degree that the clip rotates.

Opacity Specifies the degree of transparency of the image, in percentages.

Note: In Adobe After Effects, the Transform effect includes the Shutter Angle control and Use Composition option. Both controls are adjusted only in Adobe After Effects.

Turbulent Displace effect

The Turbulent Displace effect uses fractal noise to create turbulent distortions in an image. This effect is useful for adding distorted movement to a clip. For example, use it to create flowing water, funhouse mirrors, and waving flags.

Turbulent Displace effect: Original image (left) and with variations of the Turbulent Displace effect applied (center and right)

Adjust the following controls for Turbulent Displace:

Displacement Specifies the type of turbulence used. Turbulent, Bulge, and Twist warp the image in slightly different directions. Turbulent Smoother, Bulge Smoother, and Twist Smoother each perform the same operation as Turbulent, Bulge, and Twist, except that they create smoother warps and may take longer to render. Vertical Displacement warps the image vertically only. Horizontal Displacement warps the image horizontally only. Cross Displacement warps the image both vertically and horizontally.

• **Turbulent/Bulge/Twist** Warp the image in slightly different directions.

• **Turbulent Smoother/Bulge Smoother/Twist Smoother** Perform the same operation as Turbulent, Bulge, and Twist, except that they create smoother warps and may take longer to render.

• **Vertical Displacement/Horizontal Displacement** Warp the image either vertically only or horizontally only.

• **Cross Displacement** Warps the image both vertically and horizontally.

Amount Specifies the amount of displacement in the image. Higher values result in more distortion in the image.

Size Specifies the size or radius of the displaced or distorted areas in the image. Higher values result in larger areas of distortion.

Offset Specifies the portion of the fractal shape that is present in the Program monitor, altering the shape of the distortion on your clip. Because the fractal shapes used are infinite in all directions, what appears in the Program monitor is only a small portion of the entire fractal. The Program monitor behaves like a fixed viewing area, and the Offset control repositions the fractal within that view, which then brings a different portion of the fractal into view. This alters the shape of the distortion.

Complexity Specifies the level of detail in the turbulence. Increasing the Complexity value increases the detailed definition in the displacement pattern. Lower values result in smoother distortions.

Evolution Specifies the changes of the turbulence over time. Evolution values are progressive, not looping. The image continues to change with each added revolution. The appearance of the image when this option is set to 0 is different from that at 1 revolution, which, in turn, is different from that at 2 revolutions, and so on. The evolution state progresses infinitely at each new value. To force the Evolution setting to return to its original state (necessary to create a seamless loop) set the Evolution Options control to Cycle Evolution.

Set keyframes for Evolution to determine how much the turbulence evolves over the period of time allowed between keyframes. The more revolutions that are made between keyframes the more rapidly the turbulence changes. Higher values may result in flashing rather than smooth changes.

Evolution Options Specifies how you render the effect's evolution values. The options for this control are:

• **Cycle Evolution** Creates a cycle of evolution that loops over a set amount of time. Cycle Evolution returns the evolution state to its starting point to create a smooth, progressive, looping animation. Copied and pasted evolution keyframes start and end with the same value, and the resulting animation repeats, rather than producing a smoothly transitioning cycle.

• **Cycle** Specifies the number of revolutions of the Evolution setting that the fractal noise cycles through before it repeats. The amount of time allowed between evolution keyframes determines the timing or speed of these evolution cycles. Higher values create longer render times. Cycle affects only the state of the fractal, not geometrics or other controls. For example, two identical states of the fractal don't appear the same if viewed with different Size or Offset settings.

• **Random Seed** Specifies a unique random value from which to generate the turbulence. Animating the random seed value results in flashing from one set of fractal shapes to another (within that fractal type). For smooth transition of the turbulence, use the Evolution control.

Pinning Specifies how the effect pins the edges of an image so that it remains in its initial position. The None option pins no clip edges. Pin All, Pin Horizontal, and Pin Vertical minimize the effect of the turbulence on the corresponding clip edges. All Locked Options locks the clip edge so that turbulence doesn't affect the image.

Resize Layer Enables the distorted image to expand past the clip's bounding box.

Antialiasing For Best Quality Specifies the level of anti-aliasing of the displacement pattern.

Twirl effect

The Twirl effect rotates a clip around its center. The image is rotated more sharply in its center than at the edges.

Wave Warp effect

The Wave Warp effect produces the appearance of a wave traveling across an image. You can produce a variety of different wave shapes, including square, circular, and sine waves. The Wave Warp effect is automatically animated at a constant speed across the time range (without keyframes). To vary speeds, you need to set keyframes.

Wave Type Specifies the shape of the wave.

Wave Height Specifies the distance, in pixels, between wave peaks. Smaller values produce more waves.

Wave Width Specifies the size of the wave in pixels. Smaller values product narrower waves.

Direction Specifies the direction the wave travels across the image. For example, a value of 90 degrees makes waves travel from left to right. A value of 180 degrees makes waves travel from top to bottom, and a value of 225 degrees makes the waves travel diagonally from upper right to lower left.

Wave Speed Sets the speed (cycles per second) at which the waves travel. When you specify a wave speed, the ripples are automatically animated at a constant speed across the time range (without keyframes). Click the wave speed value to specify negative values or values greater than 5. A negative value reverses the wave direction, and a value of 0 produces no movement. To vary wave speed over time, set this control to 0, and then set keyframes for the Phase property of the clip.

Pinning Specifies areas of the image to be excluded from the wave. For example, if All Edges is selected, the wave does not travel across the edges of the image.

Phase Specifies the point along the waveform at which a wave cycle begins. The default value of 0 degrees starts the wave at the midpoint of its downward slope; 90 degrees starts it at the lowest point in the trough; 180 degrees starts it at the midpoint of the upward slope, and so on.

Antialiasing Sets the amount of anti-aliasing, or edge smoothing, to perform on the image. In many cases, lower settings produce satisfactory results; a high setting can significantly increase rendering time.

GPU effects

Page Curl effect

Use Page Curl to simulate a page slowly turning. As the "page" turns, you see the back of the image mapped to the opposite side of the curl. The back of the image is actually a mirror image of the front. This effect is most useful as a transition where you would like to have a high-quality, textured page peel effect to reveal an underlying frame. Page Curl includes controls that function identically to the controls in the Ripple Effect (Circular).

Page Curl adds the following controls not in the Ripple Effect (Circular):

Angle Of Curl Specifies where on the image edge the curl begins.

Curl Amount Specifies how far into the image that the curl extends.

See also

Refraction effect

Use this effect to create a ripple and add a refractive look to the surface of your image. This simulates how an object distorts when it is just beneath the surface of moving water or behind a refractive object such as frosted glass.

The Refraction effect has the following settings:

Ripple Amount Specifies the size of the ripples. Animating this property creates the effect of moving water.

Refractive Index Specifies the ratio of the light's velocity as it passes from a rarer to a denser medium.

Bump Specifies the grain amount on the surface.

Depth Specifies the depth of the surface through which you are viewing the image. For example, in the case of simulating an underwater object, adjusting this value changes how deep an object appears to be in the water.

Ripple (Circular) effect

Use Ripple (Circular) to create an effect similar to concentric ripples on the surface of water.

The Ripple (Circular) effect has the following settings:

Surface Angle X and Y Specify the degree of rotation on the designated Cartesian axis.

Ripple Center Specifies the X and Y location of the ripple center. You can also change this parameter directly in the Monitor view.

Ripple Amount Specifies the size of the ripples.

Key Light Angle A and B Specify angular location of light source in polar coordinates. Angle A is on the Z axis, and angle B is formed on XY plane.

Light Distance Specifies the distance between the light source and the center of the ripple surface.

Bump Specifies the amount of the perturbations mapped onto the ripple surface. Adjusting this option can lend a veined or knobby appearance to the surface, depending on the value you choose.

Gloss Specifies the glossiness of the surface.

Noise Specifies the amount of grain or imperfections on the surface.

Image Control effects

Black & White effect

The Black & White effect converts any color clip to grayscale; that is, colors appear as shades of gray. You cannot keyframe this effect.

Change Color effect

The Change Color effect adjusts the hue, saturation, and lightness of a range of colors. Choose the range by specifying a base color and similarity values. The similarity can be an RGB similarity, a hue similarity, or a chroma similarity.

Adjust the following controls for the Change Color effect:

View Specifies what to view in the composition. Corrected Layer shows the results of the Change Color effect. Color Correction Mask shows the areas of the layer that will be changed. White areas in the color correction mask are transformed the most, and dark areas are transformed the least.

Hue Transform Specifies the amount, in degrees, to adjust the hue of the selected colors.

Lightness Transform Specifies the amount to increase or decrease the lightness of the selected colors. Positive values brighten the selected regions; negative values darken them.

Saturation Transform Specifies the amount to increase or decrease the saturation of the selected colors. Positive values saturate the selected regions (moving toward pure color); negative values desaturate the selected regions (moving toward gray).

Color To Change Specifies the color to be changed. Matching Tolerance and Matching Softness both use this color as a target for building the color correction mask.

Matching Tolerance Specifies the degree of color matching before the color is affected by the color correction. With low tolerances, only colors very similar to the change color are added to the color correction mask. Larger tolerances add more of the image to the color correction mask.

Matching Softness Specifies the softness of the color correction. This control does not always soften the color correction mask geometrically, but it affects the severity of the color correction for regions similar to the base color.

Match Colors Specifies the criterion for determining the similarity of two colors:

• **RGB** Uses the red, green, and blue components.

• **Hue** Matches colors based on hue. For example, bright red, light pink, and burgundy have similar hue values (a hue of red, but differing values of saturation and lightness).

• **Chroma** Uses the two chromatic components to determine similarity, ignoring brightness. Chroma matching is therefore sensitive to saturation and hue differences, but not to lightness differences.

Invert Color Correction Mask Inverts the mask that determines which colors to affect. If selected, all colors will be color-corrected, except those selected by using Color to Change and matching controls.

Change To Color effect

The Change To Color effect changes a color you select in an image to another color using hue, lightness, and saturation (HLS) values. Perform color changes either by transforming or interpolating into the new color. This filter is useful for quickly changing one selected color to another, while leaving other colors in the image unaffected.

Change To Color offers flexibility and options unavailable in the Change Color effect. These options include tolerance sliders for hue, lightness, and saturation for exact color matching, and the ability to select the exact RGB values of the target color that you wish to change to.

Change to Color effect: Original image (left), with saturation removed in the planet (center), and with light green changed to yellow in the planet (right)

Adjust the following controls for the Change To Color effect:

From Specifies the color that you wish to change. This selection determines which pixels will be affected by the color change.

To Specifies the color that you wish to change to. This control determines the target color for selected pixels.

Change Specifies the HLS channels that are affected:

• **Hue** Affects hue only, leaving the original lightness and saturation untouched.

• **Hue And Lightness** Affects hue and lightness only, leaving the original saturation untouched.

• **Hue And Saturation** Affects hue and saturation only, leaving the original lightness untouched.

• **Hue, Lightness And Saturation** Affects all the channels.

Change By Specifies the color change operation the effect performs:

• **Setting To Color** Performs a direct change of affected pixels to the target color.

• **Transforming To Color** Transforms affected pixel values towards the target color, using HLS interpolation. The amount of transformation depends on how close the selected To pixel color lies to the From color and also on the Tolerance value.

Tolerance Specifies the range of pixels that Change to Color affects. Expand this control to reveal separate sliders for Hue, Lightness, and Saturation values. Higher Tolerance values expand the range of similar values. Lower Tolerance values reduce the range of similar values.

Note: Use the View Correction Matte option to better identify which pixels are affected.

Softness Specifies the edge smoothness of the selected change areas. Higher values create smoother and more seamless transitions between areas affected by the color change and those left unaffected.

View Correction Matte Specifies whether or not you are viewing a grayscale mask of the color values. White areas indicate pixels that are affected by the color change. Black areas are left unchanged. Gray areas are only slightly affected by the color change.

Note: To animate a color change, first select the initial color you wish to change; then set subsequent keyframes only for the To color.

Color Balance (HLS) effect

The Color Balance (HLS) effect alters an image's levels of hue, luminance, and saturation.

The Color Balance (HLS) effect has the following settings:

Hue Specifies the color scheme of the image.

Lightness Specifies the brightness of the image.

Saturation Adjusts the image's color saturation. The default value is 0 which doesn't affect the colors. Negative values decrease saturation, with -100 converting the clip to grayscale. Values greater than 0 produce more saturated colors.

Color Balance (RGB) effect

The Color Balance effect changes colors in the clip by adjusting the RGB levels. Drag the Red, Green, and Blue sliders to adjust the level of each color.

Color Match effect

The Color Match effect allows you to match the colors from one source clip to another by adjusting hue, saturation, and luminance. Sample eyedroppers sample shadows, midtones, and highlights from the sample or color you are trying to match. Target eyedroppers sample shadows, midtones, and highlights of the clip you are trying to adjust.

The Color Match effect has the following setting:

Method Specifies the method by which colors are adjusted including HSL, RGB, or Curves.

See also

"To match the color between two scenes" on page 273

Color Offset effect

The Color Offset effect shifts the pixels of the red, green, and blue channels in a specified direction and amount. Use this effect to create a three-dimensional clip for viewing with special glasses (one red lens and one blue lens) or to create colored ghosting effects.

To produce the appearance of the image dropping back, shift the Red channel to the left a small amount. To bring the image forward, shift the Red channel to the right a small amount.

Color Pass effect

The Color Pass effect converts a clip to grayscale, with the exception of a single specified color. Use the Color Pass effect to highlight a particular area of a clip. For example, in a clip of a basketball game, you could highlight the basketball by selecting and preserving its color, while keeping the rest of the clip displayed in grayscale. Note, however, that with the Color Pass effect, you can isolate only colors, not objects within the clip.

See also

"To isolate a single color using Color Pass" on page 276

Color Replace effect

The Color Replace effect replaces all occurrences of a selected color with a new color, preserving any gray levels. Using this effect, you could change the color of an object in an image by selecting it and then adjusting the controls to create a different color.

See also

"To replace a color" on page 274

Equalize effect

The Equalize effect alters an image's pixel values to produce a more consistent brightness or color component distribution. The effect works similarly to the Equalize command in Adobe Photoshop. Equalization can be performed using either RGB values or the brightness component. Pixels with 0 alpha (completely transparent) values are not considered, so masked layers are equalized based on the mask area. Layer quality settings do not affect Equalize.

Equalize Specifies which equalization method to use:

• **RGB** Equalizes the image based on red, green, and blue components.

• **Brightness** Equalizes the image based on the brightness of each pixel.

• **Photoshop Style** Equalizes by redistributing the brightness values of the pixels in an image so that they more evenly represent the entire range of brightness levels.

Amount To Equalize Specifies how much to redistribute the brightness values. At 100%, the pixel values are spread as evenly as possible, while lower percentages redistribute fewer pixel values.

Gamma Correction effect

The Gamma Correction effect lightens or darkens a clip without substantially changing the shadows and highlights. It does this by changing the brightness levels of the midtones (the middle-gray levels), while leaving the dark and light areas unaffected. The default gamma setting is 1.0. In the effect's Settings dialog box, you can adjust the gamma from 0.1 to 2.8.

PS Arbitrary Map effect

The PS Arbitrary Map effect applies a Photoshop arbitrary map file to a clip. An arbitrary map adjusts the brightness levels of an image, remapping a specified brightness range to darker or brighter tones. In the Curves dialog box in Photoshop, you can create an arbitrary map file for the entire image or for individual channels.

Note: The PS Arbitrary Map effect is intended only to provide compatibility with files created in earlier versions of After Effects that use the Arbitrary Map effect. Otherwise, use the Curves effect.

When loaded into Adobe Premiere Pro, the specified arbitrary map is applied to the clip or to one or more channels of the clip, depending on how it was created. If you do not select an arbitrary map, Adobe Premiere Pro applies the default map (linear distribution of brightness) to the layer

Adjust the following controls for the PS Arbitrary Map effect:

Phase Cycles through the arbitrary map. Increasing the phase shifts the arbitrary map to the right (as viewed in the Curves dialog box); decreasing the phase shifts the map to the left.

Apply Phase Map To Alpha Applies the specified map and phase to the clip's alpha channel. If the specified map does not include an alpha channel, Adobe Premiere Pro uses the default map (linear distribution of brightness) for the alpha channel.

To apply a Photoshop arbitrary map

1 Apply the PS Arbitrary Map effect to a clip in a sequence.

2 In the Effect Controls panel, click the Setup icon ⇢▤, select an arbitrary map file in the Open dialog box, and then click Open.

Although you can't import .acv files into the PS Arbitrary Map effect, you can convert these files in Photoshop to create files that are compatible with the Curves effect.

To convert .acv files for the PS Arbitrary Map effect

1 In the Curves dialog box in Photoshop, load the .acv file.

2 Click the Pencil tool and then save the file as an .amp file.

Tint effect

The Tint effect alters an image's color information. For each pixel, the luminance value specifies a blend between two colors. Map Black To and Map White To specify to which colors dark and bright pixels are mapped. Intermediate pixels are assigned intermediate values. Amount To Tint specifies the intensity of the effect.

Keying effects

Alpha Adjust effect

Use the Alpha Adjust effect in place of the Opacity effect when you need to change the default render order of Fixed effects. Change the opacity percentage to create levels of transparency.

The following Alpha Adjust effect settings let you interpret the alpha channel in the clip:

Ignore Alpha Ignores the alpha channel of the clip.

Invert Alpha Reverses the transparency and opaque areas of the clip.

Blue Screen Key effect

The Blue Screen Key effect makes all image pixels that are similar to a standard bluescreen transparent.

See also

"Blue Screen Key and Green Screen Key" on page 362

Chroma Key effect

The Chroma Key effect keys out all image pixels that are similar to a specified key color. When you key out a color value in a clip, that color or range of colors becomes transparent for the entire clip. Control the range of transparent colors by adjusting the tolerance level. You can also feather the edges of the transparent area to create a smooth transition between the transparent and opaque areas.

| A | B | C | D |

Chroma Key effect
A. Original image B. Blue color keyed out C. Image on second track D. Final composite image

See also

Color Key effect

The Color Key effect keys out all image pixels that are similar to a specified key color. This effect modifies only the alpha channel of a clip.

Color Key effect: A non-standard blue screen (left) and the background (center) are combined with Color Key (right).

When you key out a color value in a clip, that color or range of colors becomes transparent for the entire clip. Control the range of transparent colors by adjusting the tolerance level. You can also feather the edges of the transparent area to create a smooth transition between the transparent and opaque areas.

See also

Difference Matte Key effect

The Difference Matte Key effect creates transparency by comparing a source clip with a difference clip, and then keying out pixels in the source image that match both the position and color in the difference image. Typically, it is used to key out a static background behind a moving object, which is then placed on a different background. Often the difference clip is simply a frame of background footage (before the moving object has entered the scene). For this reason, the Difference Matte Key is best used for scenes that have been shot with a stationary camera.

| A | B | C | D |

Difference Matte Key effect
A. Original image B. Background image C. Image on second track D. Final composite image

See also

"About the Difference Matte Key" on page 365

"To replace a static background behind moving objects" on page 365

Eight-Point, Four-Point, and Sixteen-Point Garbage Matte effects

The three Garbage Matte effects aid in cropping out extraneous portions of a shot so that you can apply and adjust a key effect more effectively. The mattes are applied with either four, eight, or 16 adjustment points for more detailed keying. Once you apply the effect, click the Transform icon next to the effect name in the Effect Controls panel. This displays the garbage matte handles in the Program Monitor. To adjust the matte, drag the handles in the Program Monitor or drag the controls in the Effect Controls panel.

See also

"To mask out objects with garbage mattes" on page 367

Green Screen Key effect

The Green Screen Key effect keys out all image pixels that are similar to a standard greenscreen, so that they become transparent.

See also

"Blue Screen Key and Green Screen Key" on page 362

Image Matte Key effect

The Image Matte Key effect keys out areas of a clip's image based on the luminance values of a still image clip, which serves as a matte. The transparent areas reveal the image produced by clips in lower tracks. You can specify any still image clip in the project to serve as the matte; it does not have to be in the sequence. To use a moving image as the matte, use the Track Matte Key effect instead.

See also

"Using the Image Matte Key" on page 364

"To composite clips using alpha channels or brightness values" on page 364

Luma Key effect

The Luma Key effect removes all the regions of a clip that have a specified luminance or brightness. The clip's quality setting does not influence the Luma Key effect.

When the object from which you want to create a matte has a markedly different luminance value than its background, you can make the background value transparent by keying it out. For example, if you want to create a matte for musical notes on a white background, you can key out the brighter values; the dark musical notes become the only opaque area.

See also

"About the Luma Key" on page 363

Multiply Key effect

The Multiple Key effect multiplies the color values in a clip image with the underlying clip, and divides the result by 255 (the maximum pixel value of 8-bit pixels). The resulting color is never brighter than the original.

See also

"Multiply Key and Screen Key" on page 363

Non Red Key effect

The Non Red Key effect makes the clip's non-red (blue or green) pixels transparent.

See also

"Using the Non Red Key" on page 362

RGB Difference Key effect

The RGB Difference Key effect creates transparency by removing pixels from a specified color or range of colors. Select a key color by clicking the Color swatch or by dragging the eyedropper to a color in the Monitor window.

See also

"Using the RGB Difference Key" on page 361

Remove Matte effect

The Remove Matte effect removes color fringes from clips that are premultiplied with a color. It is useful when combining alpha channels with fill textures from separate files. If you import footage with a premultiplied alpha channel, or if you create alpha channels with After Effects, you may need to remove halos from an image. Halos are caused by a large contrast between the image's color and the background, or matte, color. Removing or changing the color of the matte can remove the halos.

Use Background Color to specify the new background color when you want to change the color of a matte.

Screen Key effect

The Screen Key effect multiplies the inverse brightness values of the clip's colors with that of the image produced by clips in lower tracks. The resulting color is never darker than the original. Using the Screen option is similar to the traditional technique of superimposing two different film negatives and printing the result.

See also

"Multiply Key and Screen Key" on page 363

Track Matte Key effect

The Track Matte Key effect creates transparent areas in a clip that correspond to the luminance levels of another clip. Transparent areas reveal the image produced by clips in lower tracks. Exclude the matte clip from the output by selecting the clip and choosing Clip > Enable.

See also

"Using the Track Matte Key" on page 366

"To create transparency in a superimposed clip" on page 367

Noise effects

Median effect

The Median effect replaces each pixel with the median pixel value of neighboring pixels within a given radius. At low values, this effect reduces noise. At higher values, this effect gives a clip a painterly effect.

The Median effect has the following settings:

Radius Specifies how many pixels to examine for the Median effect. For instance, when Radius is set to 1, the Median will be performed on the eight neighboring pixels that are within one pixel of the center pixel.

Operate On Alpha Channel Applies the effect to the alpha channel of the clip.

Noise & Grain effects

Dust & Scratches effect

The Dust & Scratches effect reduces noise by changing dissimilar pixels. To achieve a balance between sharpness of the image and hiding defects, try various combinations of radius and threshold settings. Draft and Best quality settings give the same results.
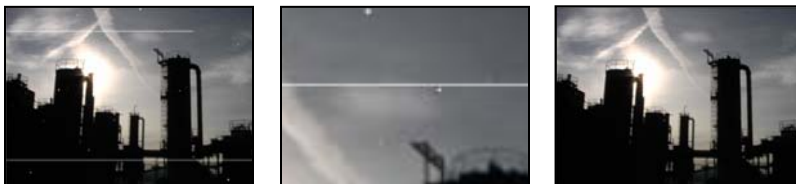
Dust & Scratches effect: Original image with scratches (left), enlarged view of scratches (center), and scratches removed with loss of clarity (right)

To apply the Dust & Scratches effect

1 Select a clip in the Timeline panel.

2 From the Noise & Grain bin in the Video Effects bin of the Effects panel, apply the Dust & Scratches effect by doing one of the following:

• Drag the effect to the Video Effects area of the Effect Controls panel.

• Drag the effect to the clip in the Timeline panel.

3 In the Effect Controls panel, click the triangle to expand the Dust & Scratches effect options.

4 Drag the Radius slider right, or enter a value in the value field from 0 to 255 pixels. (The radius determines how far the filter searches for differences among pixels. Adjusting the radius makes the image blurry. Stop at the smallest value that eliminates the defects.)

5 Drag the Threshold slider left to 0 to turn off the value, so that all pixels in the selection or image can be examined. (The threshold determines how different the pixels' values should be before they are eliminated.)

Note: The Threshold slider gives greater control for values between 0 and 128—the most common range for images— than for values between 128 and 255.

6 Increase the threshold gradually by entering a value or by dragging the slider to the highest value possible that eliminates defects.

7 Select the Operate on Alpha Channel checkbox to apply the filter to the alpha channel.

Noise Alpha effect

The Noise Alpha effect adds uniform or squared noise to the alpha channel of a source clip.

Noise Alpha effect: Original video track image (left), Original Alpha set to Clamp (center), and Noise Alpha combined with Direction Blur (right).

Adjust the following controls for the Noise Alpha effect:

Noise Specifies the type of noise the effect uses. Unique Random creates equal amounts of black and white noise. Squared Random creates high-contrast noise. Uniform Animation creates animated noise, and Squared Animation creates animated contrast.

Amount Specifies the amount of noise that's added to the clip.

Original Alpha Specifies how to apply noise to the alpha channel of a clip:

• **Add** Produces equal amounts of noise in the transparent and opaque areas of the clip.

• **Clamp** Produces noise in the opaque areas only.

• **Scale** Increases the amount of noise proportionate to the level of opacity and produces no noise in 100% transparent areas.

• **Edges** Produces noise only in partially transparent areas, such as the edge of the alpha channel.

Overflow Specifies how the effect remaps values that fall outside the grayscale range of 0-255.

• **Clip** Displays values above 255 as opaque and values below 0 as transparent.

• **Wrap Back** Forces values back into the 0-255 range, creating subtle details. For example, a value of 256 wraps back to 254, and a value of -1 wraps back to 1.

• **Wrap** Forces values back into the 0-255 range by starting values above 255 at low color values and starting values below 0 at high color values. For example, a value of 256 is wrapped to 0, 257 is wrapped to 1, and 258 is wrapped to 2. Conversely, a value of -1 is wrapped to 255, -2 is wrapped to 254, and -3 is wrapped to 253.

Random Seed Specifies a random value for noise. This control is active only if you choose Uniform Random or Squared Random.

To produce flashing noise, animate the Random Seed control. To create smoothly animated noise, animate the Noise Phase value.

Noise Phase Specifies the placement of noise. This control is active only if you choose Uniform Animation or Squared Animation from the Noise pop-up menu.

Noise Options (Animation) Specifies how you animate noise.

• **Cycle Noise** Produces a cycle of noise that plays through once in the specified amount of time.

• **Cycle (In Revolutions)** Specifies the numbers of revolutions of the Noise Phase that the noise cycles through before it repeats. (Available only when Cycle Noise is selected.)

Alter the timing of the Noise Phase keyframes to adjust the speed of the Noise Phase cycles.

See also

"About keyframes" on page 230

Noise HLS and Noise HLS Auto effects

The Noise HLS effect generates static noise in clips that use still or moving source footage. The Noise HLS Auto effect automatically creates animated noise. Both effects offer various types of noise that can be added to the hue, saturation, or lightness of a clip. Controls for these effects are the same except for the final control that determines noise animation.

Noise HLS effect: Original image track (left); Noise HLS (center); Noise HLS applied twice with low Saturation values (right).

Adjust the following controls for either the Noise HLS effect or the Noise HLS Auto effect:

Noise Specifies the type of noise the effect adds. Uniform produces evenly distributed pixel noise. Squared produces sparse, high-contrast noise that is distributed randomly. Grain produces grain-like noise that is useful for simulating film.

Hue Specifies the amount of colored noise that the effect generates, in proportion to the clip's hue values.

Lightness Specifies the amount of grayscale noise that the effect generates, in proportion to the clip's luminance values.

Saturation Specifies the amount of colored and grayscale noise that the effect generates, in proportion to the clip's saturation values.

Grain Size This control is active only when you choose Grain from the Noise pop-up menu.

Noise Phase (Noise HLS only) Specifies the random seed value for the noise. When you set keyframes for Noise Phase, the effect cycles through the phases to create animated noise. Greater value differences between keyframes increase the speed of the noise animation.

Noise Animation Speed (Noise HLS Auto only) Specifies the speed of the noise animation. To increase the rate at which the noise effect changes, set the value higher. For slower changing noise, set a lower value. To accelerate or decelerate the speed of the noise, set keyframes for this control.

See also

"About keyframes" on page 230

Perspective effects

Basic 3D effect

The Basic 3D effect manipulates a clip in an imaginary three-dimensional space. You can rotate your image around horizontal and vertical axes and move it toward or away from you. With Basic 3D, you can also create a specular highlight to give the appearance of light reflecting off a rotated surface. The light source for the specular highlight is always above, behind, and to the left of the viewer. Because the light comes from above, the image must be tilted backward to see this reflection. Specular highlights enhance the realism of the three-dimensional appearance.

Basic 3D effect: Swivel (left), Swivel and Tilt (center), and Swivel, Tilt, and Distance (right)

The Basic 3D effect has the following settings:

Swivel Controls horizontal rotation (rotation around a vertical axis). You can rotate past 90˚ to see the back side of the image, which is the mirror image of the front.

Tilt Controls vertical rotation (rotation around a horizontal axis).

Distance To Image Specifies the image's distance from the viewer. As the distance gets larger, the image recedes.

Specular Highlight Adds a glint of light that reflects off the surface of the rotated image, as though an overhead light were shining on the surface. When Draw Preview Wireframe is enabled, the specular highlight is indicated by a red plus sign (+) if it is not visible on the clip (the center of the highlight does not intersect the clip) and a green plus sign (+) if the highlight is visible. You must render a preview before the Specular Highlight effect becomes visible in the Program Monitor.

Preview Draws a wireframe outline of the three-dimensional image. Because manipulating an image in three-dimensional space can be time-consuming, the wireframe renders quickly so you can manipulate the controls to get the rotation you want. Deselect the Preview control when you finish manipulating the wireframe image to see your final results.

Bevel Alpha effect

The Bevel Alpha effect adds a beveled edge and lights to the alpha boundaries of an image, often giving two-dimensional elements a three-dimensional appearance. (If the clip has no alpha channel or its alpha channel is completely opaque, the effect is applied to the edges of the clip.) The edge created in this effect is somewhat softer than that of the Bevel Edges effect. This effect works well with text containing an alpha channel.

Bevel Edges effect

The Bevel Edges effect gives a chiseled and lighted three-dimensional appearance to the edges of an image. Edge locations are determined by the alpha channel of the source image. Unlike Bevel Alpha, the edges created in this effect are always rectangular, so images with nonrectangular alpha channels do not produce the proper appearance. All edges have the same thickness.

Drop Shadow effect

The Drop Shadow effect adds a shadow that appears behind the clip. The shape of the Drop Shadow is determined by the clip's alpha channel. Unlike most other effects, Drop Shadow can create a shadow outside the bounds of the clip (the dimensions of the clip's source).

Since Drop Shadow uses the alpha channel, it works well with 32-bit footage files from drawing programs and three-dimensional rendering programs that support the alpha channel.

Note: Because Drop Shadow works best when it is the last effect rendered, apply this effect after applying all other effects. You can create a more realistic-looking shadow on animated clips by applying and animating the Motion or Basic 3D effect prior to applying Drop Shadow instead of animating the Fixed Motion effect because Fixed effects are rendered after Standard effects.

Radial Shadow effect

The Radial Shadow effect creates a shadow from a point light source over the clip it's applied to, rather than from an diffused light source (as with the Drop Shadow effect). The shadow is cast from the alpha channel of the source clip, allowing the color of that clip to influence the color of the shadow as light passes through semi-transparent areas. You can use this effect to make a 3D layer appear to cast a shadow onto a 2D layer.

Radial Shadow effect: Original image (left) with the Radial Shadow effect applied once (center), and applied twice (right)

Adjust the following controls for the Radial Shadow effect:

Shadow Color Specifies the color of the shadow.

Note: The color(s) of the clip may override the Shadow Color if you choose Glass Edges from the Render option.

Opacity Specifies the transparency of the shadow.

Light Source Specifies the point from which light is cast over the clip to create the shadow.

Copy and paste position keyframes from another effect's control point (for example, Lens Flare) to quickly create a shadow that matches another effect's light source.

Projection Distance Specifies the distance of the surface on which the shadow falls from the clip and the light source. This value affects the size of the shadow. By default, the distance between the light source and the clip remains fixed. So, use the Projection Distance control to move the background closer or farther away from the light source and the clip, thereby making the shadow smaller or larger respectively.

Softness Specifies the softness or sharpness of the shadow's edges.

Render Specifies the type of shadow the effect creates.

• **Regular** Creates a shadow based on the Shadow Color and Opacity values, regardless of semi-transparent pixels in the original clip. (If Regular is chosen, the Color Influence control is disabled.)

• **Glass Edge** Creates a colored shadow based on the color and opacity of the original clip. If there are semi-transparent pixels in the source clip, the shadow uses both the color and transparency of the original clip. This creates the appearance, for example, of sun shining through stained glass.

The more transparent the pixels in the original clip are, the closer the shadow color matches the colors of the original clip. The Shadow Color value more influences the less transparent areas of the original clip. If there are no semi-transparent pixels in the source clip, Glass Edge has little effect on the clip.

Note: Anti-aliased edges produce colors in a shadow edge when you choose Glass Edge, even if the original clip is fully opaque. The clip's original colors shine through these anti-aliased edges, while the Shadow Color fills the center of the shadow.

Color Influence Specifies the amount of the source clip's color values that appear in the shadow. At a value of 100%, the shadow takes on the color of any semi-transparent pixels in the clip's. If this clip contains no semi-transparent pixels, Color Influence has little or no effect, and the Shadow Color value determines the shadow's color. Decreasing the Color Influence value blends the colors of the original layer in the shadow with the color chosen for the Shadow Color. Increasing Color Influence reduces the influence of the Shadow Color.

Animate Color Influence to reduce or increase the blending of the original clip's colors with the Shadow Color over time.

Shadow Only Specifies whether the original clip is visible. If this box is checked, the original clip appears over the shadow. If this box is not checked, only the shadow appears.

Resize Layer Specifies whether or not the effect considers the original clip's bounding box as the edge of the clip. If the box is checked, the shadow can extend beyond the clip boundaries. If the box is not checked, any area of the shadow falling outside the original clip's bounding box is cropped by the clip's original boundaries. This option is not useful for shadows that fall outside the composition boundaries.

Pixelate effects

Facet effect
The Facet effect clumps pixels of similar color values in cells for a painterly effect. Keyframes cannot be applied to this effect.

Render effects

4 Color Gradient effect
The 4 Color Gradient effect produces a four-color gradient. Each color is controlled by one of four individual effect points, which can be animated. Use the 4 Color Gradient effect to create color backgrounds, mix color palettes, and generate color gradients.

4 Color Gradient effect: Original images (left) and with variations of 4-Color Gradient effect applied (center and right)

Adjust the following controls for 4-Color Gradient:

Points Adjusts the positioning of each color within the four-color gradient, based on x, y coordinate values.

Colors Specifies the RGB color values for each of the four points. Color 1 sets the color of Point 1, Color 2 sets the color of Point 2, and so on.

Blend Specifies the blending of the gradient. The gradient is actually composed of four circles, each blending with one another as the result of a calculation between one circle's radius and that of the other surrounding circles. The amount of blending depends on the location of the effect points.

Jitter Specifies the amount of "jitter" (noise) in the gradient when blending is applied. Jitter uses a controlled noise type to change pixel values in the gradient, in order to reduce banding. The jitter noise affects only those areas where banding could occur.

Opacity Specifies the transparency of the gradient. The lower the value, the more transparent the gradient. The original source layer's opacity value represents 100% opacity in the effect.

Blending Mode Specifies how the gradient colors interact with the original layer colors. These Blending Modes are identical to the ones in the Timeline Modes panel.

Cell Pattern effect

The Cell Pattern effect generates cellular patterns based on cellular noise. Use it to create static or moving background textures and patterns. The patterns can be used in turn as textured mattes, as transition maps, or as a source for displacement maps.

Adjust the following controls for the Cell Pattern effect:

Cell Pattern Choose a pattern from the menu. "HQ" denotes patterns that render with more definition than their unmarked counterparts. Mixed Crystals is available only as a high-quality option. The patterns appear as pictured below:
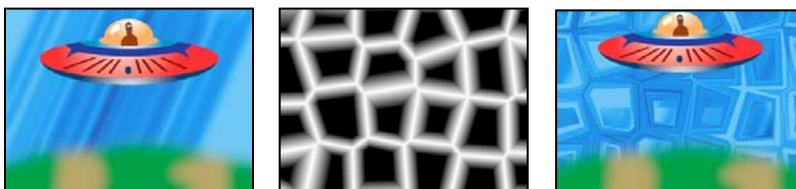
Cell Pattern effect: Original image (left), Cell Pattern effect creates a displacement map (center), and displacement map used with the Displacement Map effect (right).

Note: The Static Plates option is identical in appearance to the Plates option. However, when evolving, the static plates retain a uniform lightness value, while the plates shift the lightness of the cell pattern.

Invert Inverts the cell pattern. Black areas become white, and white areas become black.

Contrast   Specifies the contrast of the cell pattern image when you use the Bubbles, Crystal, Pillow, Mixed Crystals, or Tubular cell pattern. The control specifies sharpness for any of the Plate or Crystallize options.

Note: The clip's contrast is affected by the option chosen in the Overflow menu.

Overflow   Specifies the method used to remap values that fall outside the grayscale range of 0–255. Overflow is not available when sharpness-based cell patterns are chosen.

• **Clip**   Specifies values above 255 as pure white, and values below 0 as pure black. Contrast amount controls how much of the image falls outside this range; higher contrast amounts result in a mostly black or white image, with less gray. Therefore, less subtle cellular detail appears at higher contrast settings.

• **Soft Clamp**   Remaps grayscale values to fall inside the 0–255 range. As a result, contrast appears reduced; the cells are mostly gray with very few areas of pure black or white.

• **Wrap Back**   Changes overflow values to the 0-255 range by "folding" values back in the other direction. For example, if the maximum value allowed is 255 and the actual value is 285 (255 + 30), the resulting value is 225 (255 - 30). As a result, more defined subtle detail appears when Contrast is set above 100.

Disperse   Specifies how randomly the pattern is drawn, thus affecting the angle of the cells relative to each other. Lower values result in more uniform or grid-like cell patterns.

Size   Specifies the size of the cell shapes. The default size is 60.

Offset   Specifies the portion of the cell pattern visible in the Program monitor. This control is useful when animating the cell pattern across the boundaries of the clip.

Tiling Options   Choose one of the following options to control tiling:

• **Enable Tiling**   Renders the cell patterns in seamless tiles. The shape and number of tiles are determined by the Cells Horizontal and Cells Vertical values.

• **Cells Horizontal and Cells Vertical**   Specify the number of horizontal or vertical cells on a tile.

Note: To determine the size of your tiles, use the following calculations: tile width = Cells Horizontal x Size; tile height = Cells Vertical x Size. For example, to create a tile size of 256x256 pixels, set Size, Cells Horizontal, and Cells Vertical to 16.

Evolution   Creates subtle changes in the shape of the cell pattern. Animating this control results in smooth changes of cell shapes over time. Set keyframes for Evolution to determine how much the cell shapes "evolve" over the period of time allowed between keyframes. The more revolutions in a given amount of time, the more rapidly the cell shape changes. Higher Evolution values may result in less smooth changes in the cell shapes.

Note: Although the Evolution value is set in units called "revolutions," it is important to realize that these revolutions are progressive. The Evolution state continues to progress infinitely at each new value. Use Cycle Evolution (under Evolution Options) to return the Evolution setting to its original state at each revolution.

Evolution Options   Because of the complexity of the cell shapes that generate the cell patterns, render time can be great. For this reason, Evolution Options provide controls that render the effect for one short cycle and loop it for the duration of your project. Use the controls below to create a smooth, progressive loop segment.

• **Cycle Evolution**   Creates a loop that forces the evolution state to return to its starting point.

• **Cycle (In Revolutions)**   Available if Cycle Evolution is selected. Cycle specifies the number of revolutions (of the Evolution setting) that the cell pattern cycles through before it repeats. For example, if you set the evolution to occur over five revolutions and you set the Cycle value to 2, the evolution loops twice. The timing or speed of these Evolution cycles is determined by the amount of time allowed between Evolution keyframes. (The Cycle control

affects only the state of the cell pattern, not geometrics or other controls. For example, two identical states of the cell pattern don't appear the same if viewed with different Size or Offset settings.)

• **Random Seed**   Specifies a unique random value from which to generate the pattern. Animating this control results in flashing from one set of cell shapes to another of the same cell pattern type. For smooth transition of the cell pattern, use the Evolution control.

Note: Create new cell pattern animations by reusing previously created Evolution cycles and changing only the Random Seed value. Typing a new Random Seed value alters the cell pattern without disturbing the evolution animation.

Checkerboard effect

The Checkerboard effect creates a checkerboard pattern.

A matching color produces a subtle Checkerboard effect (center); using red with high Width and low Height settings (right) creates a striped effect.

Adjust the following controls for the Checkerboard effect:

Anchor   Specifies the point of origin, or anchor point, of the Checkerboard pattern. Moving the anchor point offsets the pattern.

Size From   Specifies how the effect defines the size of the squares. Choose one of the following options from the menu:

• **Corner Point**   Specifies that the spatial relationship between the corner point and anchor point controls determines the checkerboard size.

• **Width Slider**   Specifies that the Width value determines the checkerboard pattern size and shape. The individual checkered shape remains square because the Width value determines both width and height of the checkers.

• **Width & Height Sliders**   Specifies that the Width and Height values determine the checkerboard pattern size and shape. Choose this option to set the width and height of the checkered shapes independently.

Corner   Specifies the spatial relationship between the corner point and the anchor point. The effect uses the position of these two points to define the size of the checkerboard pattern if you choose Corner Point in the Size From menu.

Width   Specifies the horizontal width of the checkerboard pattern. If you choose Width Slider in the Size From menu, this value determines both the width and height of the checkerboard pattern. If you choose Width & Height Sliders in the Size From menu, this value determines the width only.

Height   Determines the vertical height of the checkerboard squares when you choose Width & Height Sliders in the Size From menu.

Feather   Specifies the size of the edge feather of the checkerboard pattern. Expand this control to reveal the Width and Height sliders. Set Width and Height values independently, or set them both to the same value for a uniform feather.

Color   Specifies the color of one set of the checkerboard squares. The other set of squares is always transparent.

Opacity   Specifies the transparency of the checkerboard pattern.

Blending Mode Specifies the blending mode the effect uses to create an interaction between the checkerboard pattern and the original layer. The default None mode renders the checkerboard pattern only.

Circle effect

The Circle effect creates either a customizable solid circle or ring.

Circle effect: Original image (left), circle with no edge (center), and circle specifying a Thickness & Feather Radius edge (right)

Adjust the following controls for the Circle effect:

Center Specifies the center point of the circle.

Radius Specifies the size of the radius, in pixels. (If you set the radius to be larger than your original source clip, either portions or all of the circle's edge may fall outside the composition frame, depending upon the location of the circle's center point.)

Edge Specifies the shape and edge treatment of the circle. Depending upon the option, the slider changes its name to correspond to the option. Choose one of the following options from the menu, and use the slider to adjust the option:

• **None** Creates a solid circle.

• **Edge Radius** Creates a ring. The difference in the values set for this control and Radius determines the ring's width.

• **Thickness** Creates a ring with a specified thickness. The corresponding slider measures the ring thickness in pixels.

• **Thickness * Radius** Creates a ring that uses the Radius value to determine the Thickness value. As you increase the Radius value of the ring, the Thickness value increases proportionally.

• **Thickness & Feather * Radius** Creates a ring that uses the Radius value to determine both the Thickness and Feather values. As you increase the Radius value, the Thickness and Feather values scale proportionally.

Feather Specifies the amount of feather applied to the edge of the circle. Increasing this amount softens the edges of the circle, blending it with whatever appears behind it. Decreasing this amount sharpens the edge of the circle.

Note: Feather Inner Edge is disabled when Edge is set to None, since there is no inner edge on a solid circle.

Invert Circle Specifies that the circle matte is inverted, if this box is checked.

Color Specifies the color that fills the circle.

Opacity Specifies the transparency of the circle.

Blending Mode Specifies the blending mode that the effect uses to combine the circle and the original clip. None displays only the circle without the original clip.

Ellipse effect

The Ellipse effect draws an ellipse based on the dimensions you specify in the Effect Controls panel. In addition to width and height, you can specify the thickness, softness, and color of the ellipse.

Width and Height Controls specify the width and height of the ellipse in pixels. Values range from 0 to 2000 pixels.

Thickness Specifies the thickness of the arc forming the ellipse. Values range from 0 to 1000 pixels.

Softness Specifies the softness or degree of blur of the ellipse's arc.

Ellipse effect: Original image (left), ellipse applied to the background once (center) and then applied multiple times (right).

Eyedropper Fill effect

The Eyedropper Fill effect applies a sampled color to the source clip. This effect is useful for quickly picking a solid color from a sample point on the original clip or picking a color value from one clip and using blending modes to apply this color to a second clip.

Eyedropper effect: Original image (left), and with different color samples applied (center and right)

Adjust the following controls for the Eyedropper Fill effect:

Sample Point Specifies the sampled pixel colors.

Sample Radius Specifies the size of the sample area.

Average Pixel Color Specifies which color values the effect samples within the area defined by the sample point and sample radius.

• **Skip Empty** Samples the average RGB color values, excluding those of transparent pixels.

• **All** Samples the average of all RGB color values, including those of transparent pixels.

• **All Premultiplied** Samples the average of all RGB color values, premultiplied with the alpha channel.

• **Including Alpha** Samples the average of all RGB color and alpha channel values. This results in the sampled color also containing the average transparency of the sampled pixels.

Maintain Original Alpha When selected, the effect maintains the original clip's alpha channel. If you choose Including Alpha in the Average Pixel Color menu, the original alpha is stenciled over the sampled color.

Blend With Original Specifies the amount of blending between the new solid color and the original clip.

Grid effect

Use the Grid effect to create a customizable grid. Render this grid in a color matte or as a mask in the alpha channel of the source clip. This effect is good for generating design elements and mattes within which other effects can be applied.
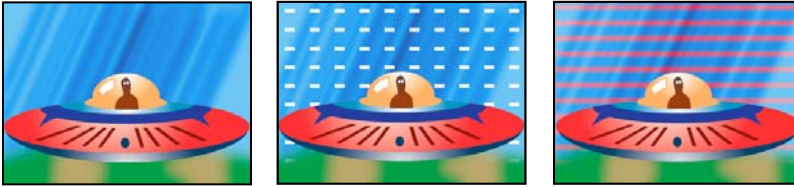
Grid effect: Original image (left) and with variations of the Grid effect applied (center and right)

Adjust the following controls for Grid:

Anchor Specifies the point of origin of the Grid, based on x, y coordinates.

Size From Specifies the grid size. Each option enables the corresponding effect controls:

• **Corner Point** Determines the spatial relationship between the Corner point and Anchor point controls.

• **Width Slider** Determines the value set for the Width control. The Grid cells will be square, as the Width value is used to determine both width and height of the Grid cells.

• **Width & Height Sliders** Determines the values set for the Width and Height controls. Use this option to set the width and height of the Grid cells independently.

Corner Specifies the size of the grid cells, based on the spatial relationship between the Corner point and the Anchor point.

Width Specifies the horizontal width of the grid cells. If you choose Width Slider in the Size From menu, this value specifies both the width and height of the grid cells. If you choose Width & Height Sliders in the Size From menu, this value specifies the width only.

Height Specifies the height of the Grid cells when you choose Width & Height Sliders in the Size From menu.

Border Specifies the border thickness of the grid. A Border value of 0 causes the grid to disappear.

Note: The anti-aliasing of the grid borders may cause the visible thickness to vary by one pixel.

Feather Specifies the softness of the grid. You can set Width and Height amounts individually, or set both to the same amount for a uniform feather on all edges. The maximum width value is 400 pixels; the maximum height value is 400 pixels.

Invert Grid Inverts the transparent and opaque areas of the grid.

Color Specifies the RGB color values of the grid.

Opacity Specifies the opacity of the grid.

Blending Mode Specifies how the grid interacts with the original layer. These blending modes are identical to those in the Timeline Modes panel.

Lens Flare effect

The Lens Flare effect simulates the refraction caused by shining a bright light into the camera lens.

The Lens Flare effect has the following settings:

Brightness Specifies the percentage of brightness. Values can range from 10% to 300%.

Flare Center Specifies a location for the center of the flare.

Lens Type Selects the type of lens to simulate.

Lightning effect

The Lightning effect creates lightning bolts and other electrical effects, including a Jacob's Ladder appearance (as seen in old horror movies) between two specified points in a clip image. The Lightning effect is automatically animated without keyframes across the clip's time range.

The Lightning effect has the following settings:

Start Point, End Point Specify where the lightning begins and ends.

Segments Specifies the number of segments that form the main lightning bolt. Higher values produce more detail but reduce the smoothness of motion.

Amplitude Specifies the size of undulations in the lightning bolt as a percentage of the clip's width.

Detail Level, Detail Amplitude Specify how much detail is added to the lightning bolt and any branches. For Detail Level, typical values are between 2 and 3. For Detail Amplitude, a typical value is 0.3. Higher values for either control are best for still images but tend to obscure animation.

Branching Specifies the amount of forking that appears at the ends of bolt segments. A value of 0 produces no branching; a value of 1.0 produces branching at every segment.

Rebranching Specifies the amount of branching from branches. Higher values produce tree-like lightning bolts.

Branch Angle Specifies the size of the angle between a branch and the main lightning bolt.

Branch Seg. Length Specifies the length of each branch segment as a fraction of the average length of the segments in the lightning bolt.

Branch Segments Specifies the maximum number of segments for each branch. To produce long branches, specify higher values for both the branch segment length and the branch segments.

Branch Width Specifies the average width of each branch as a fraction of the width of the lightning bolt.

Adjust the following controls for the Lightning effect:

Speed Specifies how fast the lightning bolt undulates.

Stability Determines how closely the lightning undulates along the line defined by the start and end points. Lower values keep the lightning bolt close to the line; higher values create significant bouncing. Use Stability with Pull Force to simulate a Jacob's Ladder effect and cause the lightning bolt to snap back to a position along the start line after it has been pulled in the Pull Force direction. A Stability value that is too low does not allow the lightning to be stretched into an arc before it snaps back; a value that is too high lets the lightning bolt bounce around.

Fixed Endpoint Determines whether the end point of the lightning bolt remains fixed in place. If this control is not selected, the end of the bolt undulates around the end point.

Width, Width Variation Specify the width of the main lightning bolt and how much the width of different segments can vary. Width changes are randomized. A value of 0 produces no width changes; a value of 1 produces the maximum width changes.

Core Width   Specifies the width of the inner glow, as specified by the Inside Color value. The Core Width is relative to the total width of the lightning bolt.

Outside Color, Inside Color   Specify the colors used for the lightning bolt's outer and inner glows. Because the Lightning effect adds these colors on top of existing colors in the composition, primary colors often produce the best results. Bright colors often become much lighter, sometimes becoming white, depending on the brightness of colors beneath.

Pull Force, Pull Direction   Specify the strength and direction of a force that pulls the lightning bolt. Use the Pull Force control with the Stability control to create a Jacob's Ladder appearance.

Random Seed   Specifies a starting point for randomizing the lightning effects you have specified. Because random movement of the lightning may interfere with another image or clip, typing another value for the Random Seed starts the randomizing at a different point, changing the movement of the lightning bolt.

Blending Mode   Specifies how the lightning is added to the layer.

Rerun At Each Frame   Controls the frame-by-frame generation of the lightning. Selecting this control regenerates the lightning at each frame. To make the lightning behave the same way at the same frame every time you run it, do not select this control. Selecting this control may increase rendering time.

Paint Bucket effect

The Paint Bucket effect is a non-destructive paint tool that fills a selected area with a solid color. It works much like the paint bucket tool in Adobe Photoshop. Use Paint Bucket for colorizing cartoon-type outlined drawings or replacing selected areas of color in an image.

Paint Bucket effect: Colors fill spiral-shapes on separate tracks (left and center); effect applied to the saucer with the Color blending mode (right)

Adjust the following controls for the Paint Bucket effect:

Fill Point   Specifies the area of the image the effect fills with the new color. Depending upon where you place the effect point, the control samples between 1 and 4 pixels' RGB and alpha values and calculates an average value. This value determines which pixels to fill with the new color. How far the fill color spreads depends upon the specified Tolerance setting, as well as the option you choose in the Fill Selector menu.

Fill Selector   Specifies the channels to fill with the new color.

• **Color & Alpha**   Specifies that the effect fills the fill point's RGB and alpha channels with the new color.

• **Straight Color**   Specifies that the effect fills only the fill point area's RGB channel with the new color.

• **Transparency**   Specifies that the effect fills only the transparent areas near the fill point. You must set a fill point in a transparent area for this option to work.

• **Opacity**   Specifies that the effect fills only the opaque areas near the fill point. You must set a fill point in an opaque area for this option to work.

• **Alpha Channel**   Specifies that the effect fills either the opaque or transparent areas in the whole image, depending upon the alpha channel value at the point you set the fill point.

Tolerance Specifies the range of pixels that the effect fills with the new color. This value is based upon the option chosen in the Fill Selector menu. Higher values expand the range of similar pixel values that the effect fills. Lower tolerance values restrict that range.

View Threshold Causes the effect to display the threshold values in black and white (based on the tolerance value) in the Composition window. The white areas within the tolerance range fill with the selected fill color. This is especially useful in tracking leaks. When there is a small gap, the color can flow over and fill areas not intended to be filled. If a leak is found, try reducing the Tolerance value or retouching your image, either by using the Paint effect or by editing the image in the application in which you created it.

Stroke Specifies how the effect treats the edges of the filled area:

• **Antialias** Anti-aliases the edges of the filled area.

• **Feather** Creates a feathered edge for the filled area. Feather Softness values create a more gradually disappearing edge.

• **Spread** Expands the area of the fill color. The Spread Radius value indicates the number of pixels the fill color extends beyond the edge of the fill area.

• **Choke** Contracts the area of the fill color. The Spread Radius value indicates the number of pixels the fill color shrinks from the edge of the fill area.

• **Stroke** Confines the fill to just the border of the selected area. The Stroke Width value indicates the width of the stroke, in pixels.

Each Stroke option has a corresponding slider except for Antialias.

Invert Fill Reverts all currently filled pixels to their original colors and transparency, and fills the previously unfilled pixels using the current settings.

Color Specifies the color to use as the fill color.

Opacity Specifies the transparency of the filled area.

Blending Mode Specifies the blending mode the effect uses to create the operation between the new fill color and the original clip. Use Fill Only if you don't wish to composite the fill with the original image. Only the fill remains visible.

Ramp effect

The Ramp effect creates a color gradient, blending it with the original image contents. Create linear or radial ramps and vary the position and colors of the ramp over time. Use the Start and End of Ramp options to specify the start and end positions. Use the Ramp Scatter control to disperse the ramp colors and eliminate banding.

Note: Traditionally, ramps do not broadcast well; serious banding occurs because the broadcast chrominance signal does not contain sufficient resolution to reproduce the ramp smoothly. The Ramp Scatter control disperses the ramp colors, eliminating the banding apparent to the human eye.

Stylize effects

Alpha Glow effect

The Alpha Glow effect adds color around the edges of a masked alpha channel. You can have a single color either fade out or change to a second color as it moves away from the edge.

The Alpha Glow effect has the following settings:

Glow slider Controls how far the color extends from the alpha channel edge. Higher settings produce larger glows (and can cause very slow processing before playback or export).

Brightness slider Controls the initial opacity of the glow.

Start Color Shows the current glow color. Click the swatch to choose another color.

End Color Lets you add an optional color at the outer edge of the glow.

Fade Out Specifies whether the colors fade out or stay solid.

Brush Strokes effect

The Brush Strokes effect applies a rough painted look to an image. You can also use this effect to achieve a pointillist style by setting the length of the brush strokes to 0 and increasing the stroke density. Although you specify the direction of strokes, they are scattered randomly by a small amount to give a more natural effect. This effect alters the alpha channel, as well as the color channels; if you have masked out a portion of the image, the brush strokes "paint" over the edges of the mask.

Brush Strokes effect: Original image (left), after applying the Brush Strokes effect (center), and adjusting Brush Size and Length (right)

Adjust the following controls for the Brush Strokes effect:

Stroke Angle Specifies the direction in which the strokes are made. The image is effectively shifted in this direction, which may cause some clipping at the layer boundaries.

Brush Size Specifies the size of the brush in pixels.

Stroke Length Indicates the maximum length of each stroke, in pixels. If Stroke Randomness is not 0, the actual length of any given stroke may be slightly less than this maximum length.

Stroke Density Higher densities result in overlapping brush strokes and interesting visual effects.

Stroke Randomness Creates non-uniform strokes. The more randomness, the more the strokes vary from the brush and stroke settings you've specified.

Paint Surface Specifies where brush strokes are applied:

• **Paint On Original Image** Puts the strokes on top of the unmodified clip. This is the default setting.

• **Paint On Transparent** Causes only the strokes themselves to appear, leaving the clip transparent between the strokes.

• **Paint On White/Paint On Black** Let you apply your strokes over a white or black background.

Blend With Original Specifies the percentage of effect applied—the higher you set this value, the more of the original clip you can see in the background. For example, if you set this value to 50%, 50% of the original clip shows through the effect; if you set this value to 100%, the effect has no affect on the clip. If you want to create an affect of a rainstorm, set this value to about 50%.

Color Emboss effect

The Color Emboss effect sharpens the edges of objects in the image but doesn't suppress any of the image's original colors.

The Color Emboss effect has the following settings:

Direction Specifies the apparent direction in which the highlight source is shining, in degrees. A setting of 45˚ causes the shadow to be cast in the northeast direction.

Relief Specifies the apparent height of the embossing, in pixels. The Relief setting actually controls the maximum width of highlighted edges.

Contrast Specifies the sharpness of the image content's edges. At lower settings, only distinct edges show the effect. As you increase the setting, the highlight becomes more extreme.

Blend With Original Adds a percentage of the original source clip to the final result.

Emboss effect

The Emboss effect sharpens the edges of objects in the image and suppresses colors. The effect also highlights the edges from a specified angle.

The Emboss effect has the following settings:

Direction Specifies the apparent direction in which the highlight source is shining, in degrees. A setting of 45˚ causes the shadow to be cast in the northeast direction.

Relief Specifies the apparent height of the embossing, in pixels. The Relief setting actually controls the maximum width of highlighted edges.

Contrast Specifies the sharpness of the image content's edges. At lower settings, only distinct edges show the effect. As you increase the setting, the highlight becomes more extreme.

Find Edges effect

The Find Edges effect identifies the areas of the image that have significant transitions and emphasizes the edges. Edges can appear as dark lines against a white background or colored lines against a black background. When the Find Edges effect is applied, images often look like sketches or photographic negatives of the original.

The Find Edges effect has the following settings:

Invert Inverts the image after the edges are found. When Invert is not selected, edges appear as dark lines on a white background. When Invert is selected, edges appear as bright lines on a black background.

Leave Color effect

The Leave Color effect removes all the colors from a clip except those similar to a given color. For example, a movie of a basketball game could be decolored except for the orange of the ball itself.
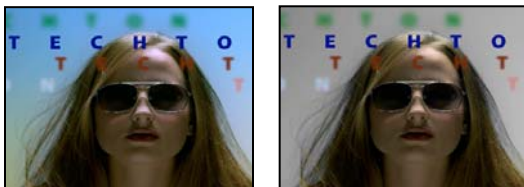
Leave Color effect: Original image (left), and with the Leave Color effect applied (right)

Adjust the following controls for the Leave Color effect:

Amount To Decolor Specifies how much color is removed from the layer. A setting of 100% causes the areas of the image dissimilar to the selected color to appear as shades of gray. At 50%, those areas lose half of their color saturation.

Color To Leave Specifies the color that is to be left untouched.

Tolerance Specifies how closely the effect matches colors. A value of 0% decolors all areas of the image except those that match the Color To Leave exactly. A value of 100% causes no color change.

Edge Softness Specifies the sharpness of the color boundaries. High values smooth the transition from color to gray.

Match Colors Specifies the color model to use for similarity. RGB uses the RGB color space to determine which areas are decolored. Match Colors is a strict matching technique and usually decolors more of the image than Hue. Hue uses hue (color) to determine which areas are decolored. In other words, choosing light blue as the Color To Leave also leaves dark blue, since both colors have the same hue.

Mosaic effect

The Mosaic effect fills a layer with solid color rectangles. It is useful for creating a highly pixelated image.

The Mosaic effect has the following settings:

Horizontal/Vertical Blocks Specifies the number of mosaic divisions in each direction.

Sharp Colors Gives each tile the color of the pixel in its center in the unaffected clip. Otherwise, the tiles are given the average color of the corresponding region in the unaffected clip.

Noise effect

The Noise effect randomly changes pixel values throughout the image. The Noise effect has the following settings:

Amount Of Noise Specifies the amount of noise, and therefore the amount of distortion, through random displacement of the pixels. The range is 0% (no effect) to 100% (the image may not be recognizable).

Noise Type Randomly changes the red, green, and blue values of the image's pixels individually when Use Color Noise is selected. Otherwise, the same value is added to all channels.

Clipping Determines whether the noise causes pixel colors to wrap around. When the color value of a pixel gets as large as it can be, clipping makes it stay at that value. With unclipped noise, the color value wraps around or starts again at low values. When Clipping is selected, even 100% noise leaves a recognizable image. If you want a completely randomized image, turn off Clipping and turn on Color Noise.

Replicate effect

The Replicate effect divides the screen into tiles and displays the whole image in each tile. Set the number of tiles per column and row by dragging the slider.

Roughen Edges effect

The Roughen Edges effect roughs up the edges of a clip's alpha channel by using calculations. It gives rasterized text or graphics a naturally rough look, like that of eroded metal or typewriter text.

Roughen Edges effect: Original image (left), with Edge Type set to Roughen (center) and with Rusty Color (right)

Adjust the following controls for the Roughen Edges effect:

Edge Type Specifies how the effect is applied to the alpha channel. If you choose an option that uses color, such as Photocopy Color, specify the color using the Edge Color control.

Edge Color Fills the effect areas with this color when you choose an Edge Type that uses color, such as Roughen Color.

Border Specifies how far from an alpha channel edge the effect extends.

Edge Sharpness Specifies how sharp or soft the roughened edge appears. Low values create softer edges, and high values create sharper edges.

Fractal Influence Specifies how much of the introduced roughness is influenced by fractal calculations.

Scale Specifies the scale of the fractal used to calculate the roughness.

Stretch Width Or Height Specifies the width or height of the fractal used to calculate the roughness.

Offset (Turbulence) Specifies the portion of the fractal shape that is present in the Project monitor, altering the shape of the distortion or roughness applied to your clip. Because the fractal shapes generated by this effect are infinite in all directions, the result that appears on the clip is only a small portion of the entire fractal. Animating the Offset control repositions the fractal, bringing a different portion of it into view. This alters the shape and texture of the roughness.

Complexity Specifies the level of detail in the roughness. Higher Complexity values increase the detailed definition in the texture of the roughness. Lower Complexity values reduce the definition.

Note: Increasing complexity results in longer rendering times. Reduce the Scale value rather than increasing Complexity to achieve similar results.

Evolution Creates subtle changes in the shape of the roughness. Animating this setting results in smooth changes or "evolution" of the roughness over time. Set keyframes for Evolution to determine how much the roughness will "evolve" over the period of time between keyframes. The more revolutions in a given amount of time, the more rapidly the roughness changes. Higher Evolution values may result in less smooth changes in the roughness.

Note: Although the Evolution value is set in units called "revolutions," it is important to realize that these revolutions are progressive. The Evolution state continues to progress infinitely at each new value. Use the Cycle Evolution option (explained below) to return the Evolution setting to its original state at each revolution.

Evolution Options Evolution Options provide controls that render the effect for one short cycle and then loop it for the duration of your project. Use the following controls to create a smooth, progressive, nonrepeating loop:

• **Cycle Evolution** Creates a loop that forces the evolution state to return to its starting point.

• **Cycle** Specifies the number of revolutions (of the Evolution setting) that the fractal noise cycles through before it repeats. For example, if you set the evolution to occur over five revolutions and you set the Cycle value to 2, then the evolution loops twice. The timing or speed of these Evolution cycles is determined by the amount of time allowed between Evolution keyframes. The Cycle control is available only when you select Cycle Evolution.

Note: The Cycle control affects only the state of the fractal, not geometrics or other controls. For example, two identical states of the fractal will not appear the same if viewed with different Size or Offset settings.

• **Random Seed** Specifies a unique random value from which to generate the roughness texture. Animating this property results in flashing from one set of fractal shapes to another within the same fractal type. For smooth transition of the roughness, use the Evolution control.

Note: Create new roughness animations by re-using previously created Evolution cycles and changing only the Random Seed value. Typing a new Random Seed value alters the noise pattern without disturbing the evolution animation.

Solarize effect

The Solarize effect creates a blend between a negative and positive image, causing the image to appear to have a halo. This effect is analogous to briefly exposing a print to light during developing.

Strobe Light effect

The Strobe Light effect performs an arithmetic operation on a clip at periodic or random intervals. For example, every five seconds a clip could appear completely white for one-tenth of a second, or a clip's colors could invert at random intervals.

The Strobe Light effect has the following settings:

Blend With Original Specifies the intensity, or brightness, of the effect. A value of 0 causes the effect to appear at full intensity; higher values diminish the intensity of the effect.

Strobe Duration Specifies in seconds how long a strobe effect lasts.

Strobe Period Specifies in seconds the duration between the start of subsequent strobes. For example, if the Strobe Duration is set to 0.1 second and the Strobe Period is set to 1.0 second, the clip has the effect for 0.1 second and then is without the effect for 0.9 second. If this value is set lower than the Strobe Duration, the strobe effect is constant.

Random Strobe Probability Specifies the probability that any given frame of the clip will have the strobe effect, giving the appearance of a random effect.

Strobe Specifies how the effect is applied:

• **Operates On Color Only** Performs the strobe operation on all color channels.

• **Makes Layer Transparent** Makes the clip transparent when a strobe effect occurs.

Strobe Operator Specifies the arithmetic operator to use when Operates On Color Only is chosen from the Strobe menu. The default setting is Copy.

Texturize effect

The Texturize effect gives a clip the appearance of having the texture of another clip. For example, you could make the image of a tree appear as if it had the texture of bricks, and control the depth of the texture and the apparent light source.

The Texturize effect has the following setting:

Texture Placement Specifies how the effect is applied:

• **Tile Texture** Applies the texture repeatedly over the clip.

• **Center Texture** Positions the texture in the middle of the clip.

• **Stretch Texture To Fit** Stretches the texture to the dimensions of the selected clip.

Write-on effect

The Write-on effect animates strokes on a clip. For example, you can simulate the writing of cursive text or create snakelike movement for a stroke. Using the Write-on effect, you can animate the brush size, color, hardness, and opacity of a stroke.

Write-on effect: Animating strokes

Adjust the following controls for the Write-on effect:

Brush Position Specifies where the stroke begins.

Color, Brush Size, Brush Hardness, and Brush Opacity Specify the size and appearance of the stroke.

Stroke Length Specifies the length, in seconds, of the stroke at any moment. If this value is 0, the stroke has unlimited length. Use a single stroke length (not 0) for all keyframes to create a snakelike movement of the stroke across the clip. Change the stroke length at keyframes to make the length of the stroke expand and contract as it is drawn.

Brush Spacing Specifies the time interval, in seconds, between dabs of color as the stroke is drawn. Smaller values produce smoother paint strokes but take more time to render.

Paint Time Properties Specifies whether paint properties (color and opacity) are applied to each stroke segment or to the entire stroke:

• **None** Applies color and opacity specified at each keyframe to the entire stroke.

• **Color** Applies the color specified at a keyframe to the stroke starting at that keyframe until it is changed at a later keyframe. The opacity specified at each keyframe is applied to the entire stroke.

• **Opacity** Applies the opacity specified at a keyframe to the stroke starting at that keyframe until it is changed at a later keyframe. The color specified at each keyframe is applied to the entire stroke.

Brush Time Properties Specifies whether brush properties (size and hardness) are applied to each stroke segment or to the entire stroke:

• **None** Applies the brush size and hardness specified at each keyframe to the entire stroke.

• **Size** Applies the brush size specified at a keyframe to the stroke starting at that keyframe until it is changed at a later keyframe. The hardness specified at each keyframe is applied to the entire stroke.

• **Hardness** Applies the hardness specified at a keyframe to the stroke starting at that keyframe until it is changed at a later keyframe. The size specified at each keyframe is applied to the entire stroke.

• **Size & Hardness** Applies both the brush size and hardness specified at a keyframe to the stroke starting at that keyframe until they are changed at a later keyframe.

Paint Style Specifies whether the stroke is applied to the original layer or to a transparent layer.

See also

"About keyframes" on page 230

Time effects

Echo effect

The Echo effect combines frames from many different times in a clip. It has a variety of uses, from a simple visual echo to streaking and smearing effects. This effect is visible only when there is motion in the clip. By default, any previously applied effects are ignored when you apply the Echo effect.

Echo effect: Original image (left), with low echo values (center), and with increased number of echoes (right)

The Echo effect has the following settings:

Echo Time Specifies the time, in seconds, between echoes. Negative values create echoes from previous frames; positive values create echoes from upcoming frames.

Number Of Echoes Specifies the number of frames to combine for the Echo effect. For example, if two echoes are specified, Echo will make a new image out of [current time], [current time + Echo Time], and [current time + 2 * Echo Time].

Starting Intensity Specifies the intensity, or brightness, of the starting frame in the echo sequence. For example, if this is set to 1, the first frame is combined at its full intensity. If this is set to 0.5, the first frame is combined at half intensity.

Decay Specifies the ratio of intensities of subsequent echoes. For example, if the decay is set to 0.5, the first echo will be half as bright as the Starting Intensity. The second echo will then be half that, or 0.25 times the Starting Intensity.

Echo Operator Specifies the operations to be performed between echoes:

• **Add** Combines the echoes by adding their pixel values. If the starting intensity is too high, this mode can quickly overload and produce streaks of white. Set the Starting Intensity to 1.0 per number of echoes and the Decay to 1.0 to blend the echoes equally.

• **Maximum** Combines the echoes by taking the maximum pixel value from all the echoes.

• **Minimum** Combines the echoes by taking the minimum pixel value from all the echoes.

• **Screen** Emulates combining the echoes by sandwiching them optically. This is similar to Add, but it will not overload as quickly.

• **Composite In Back** Uses the echoes' alpha channels to composite them back to front.

• **Composite In Front** Uses the echoes' alpha channels to composite them front to back.

Posterize Time effect

The Posterize Time effect locks a clip to a specific frame rate. Posterize Time is useful on its own as a special effect, but it also has more subtle uses. For example, 60-field video footage can be locked to 24 fps (and then field-rendered at 60 fields per second) to give a film-like look. This effect is sometimes called Strobe in hardware devices.

Animating the value of the Frame Rate slider can give unpredictable results. For this reason, the only interpolation of the frame rate allowed is Hold.

Transform effects

Clip effect

The Clip effect trims rows of pixels off the edges of a clip and replaces the trimmed areas with a specified background color. Use this effect to trim away noise and pixel skew that may result from overscanning during digitizing. If you want Adobe Premiere Pro to automatically resize the trimmed clip to its original dimensions, use the Crop effect instead of the Clip effect.

The Clip effect has the following options:

Left, Top, Right, Bottom Crops each edge of the clip separately.

Fill Color Specifies the color that replaces the trimmed areas. The default color is black.

Crop effect

The Crop effect trims rows of pixels from the edges of a clip and automatically resizes the trimmed clip to its original dimensions. Use the slider controls to crop each edge of the clip separately. You can crop by pixels or image percentage.

If you don't want Adobe Premiere Pro to automatically resize the trimmed clip to its original dimensions, use the Clip effect instead of the Crop effect.

Note: You can directly manipulate the crop in the Program monitor. Click the Transform icon 🔲🢩 *next to Crop in the Effect Controls panel. Drag one of the corner handles.*

Edge Feather effect

The Edge Feather effect lets you vignette the video in a clip by creating a soft black border on all four sides. The border width is controlled by entering an Amount value. You can also click the Setup button ⇥▤ and move the slider in the Edge Feather Settings dialog box.

Horizontal Flip effect

The Horizontal Flip effect reverses each frame in a clip from left to right; however, the clip still plays in a forward direction.

Horizontal Hold effect

The Horizontal Hold effect skews the frames to the left or to the right; the effect is similar to the horizontal hold setting on a television set. Drag the slider to control the clip's slant.

Roll effect

The Roll effect rolls a clip to the left or to the right, or up or down, as if the image were on a cylinder.

Vertical Flip effect

The Vertical Flip effect flips a clip upside down. Keyframes cannot be applied to this effect.

Vertical Hold effect

The Vertical Hold effect scrolls the clip upward; the effect is similar to adjusting the vertical hold on a television set. Keyframes cannot be applied to this effect.

Transition effects

Block Dissolve effect

The Block Dissolve effect makes a clip disappear in random blocks. The width and height of the blocks, in pixels, can be set independently. At Draft quality, the blocks are placed with pixel accuracy and have sharply defined edges; at Best quality, the blocks can be positioned with subpixel accuracy and have soft edges.

Block Dissolve effect: Original image (left) and after applying the Block Dissolve effect (center and right)

Gradient Wipe effect

The Gradient Wipe effect creates transitions based on the luminance values of a clip on second video track, called the gradient layer. The luminance of a pixel in the gradient determines the time at which the corresponding pixel in the clip on the first video track becomes transparent. Dark areas of the gradient layer represent those areas which become transparent first, followed by lighter areas.

Gradient Wipe effect: Original image (left) and after applying the Gradient Wipe effect (center and right)

For example, a simple grayscale gradient from left to right produces a left-to-right wipe. The gradient layer need not be a still image; you can use a clip any video track as a gradient for unusual wipe effects. You can create more interesting wipes in a variety of ways. The Ramp effect is a good starting point because it can generate a variety of grayscale gradients. To make completely custom gradients, paint them in a program such as Adobe Photoshop, or draw them in a program such as Adobe Illustrator.

Adjust the following controls for the Gradient Wipe effect:

Transition Completion Specifies the percentage of the transition applied to the clip.

Transition Softness Specifies the amount of softness applied to the transition's edge.

Gradient Layer Specifies the clip used as the gradient. The gradient layer must be in the same sequence as the clip to which you apply Gradient Wipe.

Gradient Placement Specifies how the gradient is positioned and sized in the clip:

• **Tile Gradient** Creates multiple tiled copies of the gradient.

• **Center Gradient** Places a single gradient in the center of the clip.

• **Stretch Gradient To Fit** Resizes the gradient layer horizontally and vertically to fit the entire area of the clip.

Invert Gradient Inverts the position of the gradient layer and the clip affected by the gradient transition.

Linear Wipe effect

The Linear Wipe effect performs a simple linear wipe of a clip in a specified direction.

Wipe Angle Specifies the direction that the wipe travels. For example, at 90˚ the wipe travels from left to right.

Linear Wipe effect: Original image (left) and after applying the Linear Wipe effect (center and right)

Radial Wipe effect

The Radial Wipe effect reveals an underlying clip using a wipe that circles around a specified point.

Start Angle Control specifies the position or angle at which the transition starts. With a start angle of 0˚, the transition starts at the top of the clip.

Wipe Specifies whether the transition moves clockwise or counterclockwise, or alternates between the two.

Radial Wipe effect: Original image (left) and after applying the Radial Wipe effect (center and right)

Venetian Blinds effect

The Venetian Blinds effect reveals an underlying clip using strips of specified direction and width.

Venetian Blinds effect: Original image (left) and after applying the Venetian Blinds effect (center and right)

Video effects

Broadcast Colors effect

The Broadcast Colors effect alters pixel color values so that the clip can be accurately represented in a television broadcast. Computers represent colors as combinations of red, green, and blue. Consumer video equipment represents colors using different composite signals. Home video equipment cannot reproduce signals above a certain amplitude, and computer-generated colors can easily exceed this limit. (Signal amplitude is measured in IRE units; 120 IRE units is the maximum possible transmission amplitude.) Use the Broadcast Colors effect to reduce luminance or saturation to a safe level.

To achieve the same IRE level as an image with reduced luminance, reducing saturation requires greater amplitude modification, which alters the image more. *Key Out Unsafe* and *Key Out Safe* make it easier for you to determine which portions of the image will be affected by the Broadcast Colors effect at the current settings. If you make your background a contrasting color and temporarily select *Key Out Unsafe* or *Key Out Safe*, the background will be visible through affected or unaffected areas of the clip, respectively.

An unsafe level simply means that if some portions of your sequence exceed the safe level, they will not look as you intended when viewed on a television monitor. Here are some guidelines for using color in movies intended for broadcast:

• Avoid using highly saturated colors. For example, a red value of 255 used with green and blue values of 0 will cause red to smear on an NTSC monitor.

• Avoid pure black and pure white values. Commonly used values for black and white are 16 and 235, respectively.

• Render a test of your sequence and play it back on an NTSC monitor to ensure that colors are represented accurately.

Note: The output you are creating should determine whether you use this effect. Many video cards, on output, automatically reduce luminance or saturation to safe levels.

The Broadcast effect has the following options:

Broadcast Locale Specifies the type of broadcast standard you intend to use. *NTSC* (National Television Standards Committee) is the North American standard. It is also used in Japan. *PAL* (Phase Alternating Line) is used in most of Western Europe and South America.

How To Make Color Safe Specifies the method of reducing the signal amplitude:

• **Reduce Luminance** Reduces a pixel's brightness by moving it towards black. This is the default setting.

• **Reduce Saturation** Moves the pixel toward a gray of similar brightness, making it less colorful.

• **Key Out Unsafe** Makes unsafe pixels transparent.

• **Key Out Safe** Makes safe pixels transparent.

Maximum Signal Specifies the IRE unit level above which your clip's pixels are altered. The range is Amplitude (IRE) from 90 to 120 IRE. A level of 100 can affect a clip noticeably; a level of 120 is the maximum possible IRE and is risky. The default, 110 IRE units, is conservative.

Field Interpolate effect

The Field Interpolate effect recreates a missing field (usually the odd or even scan lines, common to television or interlaced monitors, that have been dropped during capture) by using line averages. This effect can be useful for full-screen output, where a missing field is likely to be noticeable.

Timecode effect

The Timecode effect overlays a timecode display on your video to make pinpointing scenes and collaborating with team members and clients easier. The timecode display indicates whether the clip is progressive or interlaced. If the clip is interlaced video, the symbol indicated whether the frame is the upper or lower field. Settings in the Timecode effect let you control the display position, size, and opacity, as well as format and source options.

The Timecode effect has the following controls:

Position Adjusts the horizontal and vertical position of the timecode.

Size Specifies the size of text.

Opacity Specifies the opacity of the text.

Field Symbol Makes the interlaced field symbol visible or invisible to the right of the timecode.

Format Chooses the timecode format as SMPTE, Frames, Feet + Frames (16mm), or Feet + Frames (35mm).

Timecode Source Chooses the source for the timecode:

• **Clip** Displays the timecode starting at 0 from the beginning of the clip.

• **Media** Displays the timecode of the media file.

• **Generate** Starts the timecode as determined by the Starting Time In The Offset option and counts up based on the Time Display option.

Time Display Sets the timebase used by the Timecode effect. By default, this option is set to the project timebase when the Timecode Source is set to Clip.

Offset Adds or subtracts up to 50 frames from the displayed timecode.

Label Text Displays a three character label to the left of the timecode. Choose from None, Automatic, and Camera 1 through Camera 9.

Audio effects

About audio effects in Adobe Premiere Pro

Adobe Premiere Pro includes VST (Virtual Studio Technology) audio plug-ins designed to alter or enhance the properties of audio clips. Most of these effects are available for mono, stereo, and 5.1 clips, and can be applied to either clips or tracks, unless specified otherwise. If you have Adobe Audition installed, Adobe Premiere Pro automatically locates, recognizes, and uses the VST effects from that program as well.

Note: Each audio effect includes a bypass option that allows you to turn the effect on or off as specified by the keyframes that you set.

Balance effect

The Balance effect lets you control the relative volumes of the left and right channels. Positive values increase the proportion of the right channel; negative values increase the proportion of the left channel. Apply to stereo clips only. This effect is available for stereo clips only.

Bandpass effect

The Bandpass effect removes frequencies that occur outside the specified range, or band of frequencies. This effect is available for 5.1, stereo, or mono clips.

The Bandpass effect has the following options:

Center Specifies the frequency at the center of the specified range.

Q Specifies the width of the frequency band to preserve. Low settings create a wide range of frequencies, and high settings create a narrow band of frequencies.

Bass effect

The Bass effect lets you increase or decrease lower frequencies (200 Hz and below). Boost specifies the number of decibels by which to increase the lower frequencies. This effect is available for 5.1, stereo, or mono clips.

Channel Volume effect

The Channel Volume effect lets you independently control the volume of each channel in a stereo or 5.1 clip or track. Each channel's level is measured in decibels.

DeEsser effect

The DeEsser removes sibilance and other high frequency "SSS"-type sounds, which are often created when a narrator or vocalist pronounces the letters "s" and "t." This effect is available for 5.1, stereo, or mono clip.

The DeEsser effect has the following settings:

Gain Specifies the amount of reduction applied to the "SSS" sound. The meter displays the amount of the reduction, in decibels.

Male and Female Specifies the gender of the narrator or vocalist. This option helps the effect to adapt to the difference in tone between genders.

DeHummer effect

The DeHummer removes unwanted 50 Hz / 60 Hz hum from the audio. This effect is available for 5.1, stereo, or mono clip. The DeHummer effect has the following settings:

Reduction Specifies the amount of reduction to apply to the hum. High values may also cut necessary audio information in the low end.

Frequency Specifies the center frequency of the hum. Usually this will be 50 Hz in Europe and Japan, and 60 in the US and Canada. Often the frequency of the hum is not static, but will vary by +/– 5 Hz. Click the 50 Hz or 60 Hz buttons to set the respective frequency.

Filter Specifies the number of filters to use to remove the hum. Hum is comprised not only of the fundamental frequencies of 50 or 60 Hz, but also contain harmonics with frequencies that are multiples of the fundamental (100/110 Hz, 150/ 160 Hz, and such). Higher values cause greater CPU usage. Adjusting this value determines the number of harmonic frequencies to filter. For example, if you choose 60 Hz as the Frequency value, and choose 4# as the Filter value, the DeHummer filters the 60 Hz frequency along with three harmonic frequencies (120 Hz, 240 Hz, and 480 Hz), for a total of four frequencies filtered, hence the value of 4#. Higher values require more processing power.

Delay effect

The Delay effect adds an echo of the audio clip's sound that plays after a specified amount of time. This effect is available for 5.1, stereo, or mono clip. The Delay effect has the following settings:

Delay Specifies the amount of time before the echo plays. The maximum is 2 seconds.

Feedback Specifies a percentage of the delayed signal to be added back into the delay to create multiple decaying echoes.

Mix Controls the amount of echo.

DeNoiser effect

The DeNoiser effect automatically detects tape noise and removes it. Use this effect to remove noise from analog recordings, such as magnetic tape recordings. This effect is available for 5.1, stereo, or mono clip.

The DeNoiser effect has the following settings:

Noise Floor Specifies the level (in decibels) of the noise floor as the clip plays.

Freeze Stops the noise floor estimation at the current value. Use this control to locate noise that drops in and out of a clip.

Reduction Specifies the amount of noise to remove within a range of –20 to 0 dB.

Offset Sets an offset value between the automatically detected noise floor and the value defined by the user. This is limited to a range between –10 and +10 dB. Offset allows additional control when the automatic denoising is not sufficient.

Dynamics effect

The Dynamics effect provides a set of controls that can be combined or used independently to adjust audio. Use either the graphical controls in the Custom Setup view, or adjust values in the Individual Parameters view. This effect is available for 5.1, stereo, or mono clips.

The Dynamics effect has the following settings:

AutoGate Cuts off a signal when the level falls below the specified threshold. Use this control to remove unwanted background signals in recordings, such as a background signal in a voice-over. Set the gate to close whenever the speaker stops, thereby removing all other sounds. The LED display colors indicate the gate's mode: open (green), attack or release (yellow), and closed (red). Use the following controls for Gate:

• **Threshold** Specifies the level (between –60 and 0 dB) that the incoming signal must exceed to open the gate. If the signal level falls below this level, the gate closes, muting the incoming signal.

• **Attack** Specifies the time the gate takes to open after the signal level exceeds the threshold.

• **Release** Sets the time (between 50 and 500 milliseconds) the gate takes to close after the signal level has fallen below the threshold.

• **Hold** Specifies the time (between 0.1 and 1000 milliseconds) the gate stays open after the level has fallen below the threshold.

Compressor   Balances the dynamic range to create a consistent level throughout the duration of the clip by increasing the level of soft sounds and decreasing the level of loud sounds. Use the following controls for Compressor:

• **Threshold**   Sets the level (between –60 and 0 dB) that the signal must exceed to invoke compression. Levels that fall below the threshold are unaffected.

• **Ratio**   Sets the ratio by which compression is applied, up to 8:1. For example, if the ratio is 5:1, and the input level increases by 5 dB, the output increases by only 1 dB.

• **Attack**   Sets the time (between 0.1 and 100 milliseconds) that the compressor takes to respond to a signal that exceeds the threshold.

• **Release**   Specifies the time (between 10 and 500 milliseconds) it takes for the gain to return to the original level when the signal falls below the threshold.

• **Auto**   Calculates the release time based on the incoming signal.

• **MakeUp**   Adjusts the compressor's output level (between –6 and 0 dB) to account for loss in gain caused by compression.

Expander   Reduces all signals below the specified threshold to the set ratio. The result is similar to the gate control but is more subtle. Use the following controls with Expander:

• **Threshold**   Specifies a level in which the signal must fall to activate the expander. Levels that exceed the threshold are unaffected.

• **Ratio**   Sets the rate at which signals are expanded, up to 5:1. For example, if the ratio is 5:1, a level decrease of 1 dB is expanded by 5 dB, resulting in a much faster decrease of the signal.

Limiter   Reduces clipping in audio clips that contain peaks in the signal. For example, by leveling out peaks that exceed 0 dB in an audio file, the overall level of the audio doesn't have to be reduced below 0 dB to avoid clipping. Use the following controls with Limiter:

• **Threshold**   Specifies the maximum level of the signal, between –12 and 0 dB. All signals that exceed the threshold are reduced to the same level as the threshold.

• **Release**   Specifies the time (between 10 and 500 milliseconds) required for the gain to return to the normal level after a clip occurs.

SoftClip   Reduces clipping similar to Limiter but doesn't use hard limiting. This control adds an edge to some signals to better define them within an overall mix.

EQ effect

The EQ effect acts as a parametric equalizer, meaning that it controls frequency, bandwidth, and level using multiple bands. The effect includes three fully parametric mid bands, a high band, and a low band. The low and high bands are shelving filters, by default. Gain is constant over frequency. The Cut control switches the low and high band from shelving to cutoff filters. Gain is fixed to –12 dB per octave and is deactivated in cutoff mode.

Use the graphical controls in the Custom Setup view, or adjust values in the Individual Parameters view. In the Custom Setup view, you can control the parameters of the filter bands in the Frequency window by dragging band handles. Each band includes a control for Frequency and Gain. Mid bands include two additional controls for adjusting the Q-factor. This effect is available for 5.1, stereo, or mono clips.

The EQ effect has the following settings:

Frequency   Specifies the amount by which to increase or decrease the band (between 20 and 2000 Hz).

Gain Specifies the amount by which to increase or decrease the band (between –20 and 20 dB).

Cut Changes the functionality of the filter from shelving to cutoff.

Q Specifies the width of each filter band (between 0.05 and 5.0 octaves).

Output Specifies the amount of gain to compensate for increases or reductions of frequency bands on the output gain of the EQ.

Fill Left, Fill Right effects

The Fill Left effect duplicates the left channel information of the audio clip and places it in the right channel, discarding the original clip's right channel information. The Fill Right effect duplicates the right channel information and places it in the left channel, discarding the existing left channel information. Apply to stereo audio clips only.

Highpass, Lowpass effects

The Highpass effect removes frequencies below the specified Cutoff frequency. The Lowpass effect eliminates frequencies above the specified Cutoff frequency. The Highpass and Lowpass effects are available for 5.1, stereo, or mono clips.

Invert effect

The Invert effect inverts the phase of all channels. This effect is available for 5.1, stereo, or mono clips.

MultibandCompressor effect

The MultibandCompressor effect is a three-band compressor with controls for each band. Use this effect instead of the compressor in Dynamics when you need a softer sounding compressor.

Use the graphical controls in the Custom Setup view, or adjust values in the Individual Parameters view. The Custom Setup view displays the three bands (low, mid, high) in the Frequency window. You control the gain for each band by adjusting handles for makeup gain and frequency range. The handles of the center band determine the crossover frequency of the bands. Drag the handles to adjust the corresponding frequency. This effect is available for 5.1, stereo, or mono clips.

The MultibandCompressor effect includes the following settings:

Solo Plays the active band only.

MakeUp Adjusts the levels, in decibels.

BandSelect Selects a band. In the graphical control, click a band to select it.

Crossover Frequency Increases the range of frequencies for the selected band.

Output Specifies the output gain adjustment to compensate for the reduction or increase in gain caused by compression. This helps to preserve the mix of the individual gain settings.

Use the following controls for each band:

Threshold 1-3 Specifies the level (between –60 and 0 dB) the incoming signal must exceed to invoke compression.

Ratio 1-3 Specifies the rate of compression, up to 8:1.

Attack 1-3 Specifies the time (between 0.1 and 100 milliseconds) the compressor takes to respond to a signal that exceeds the threshold.

Release 1-3 Specifies the time required for the gain to return to the original level when the signal falls below the threshold.

MakeUp 1-3 Adjusts the compressor's output level (between –6 and +12 dB) to compensate for a loss in gain caused by compression.

Multitap Delay effect

The Multitap Delay effect adds up to four echoes of the original audio in the clip. This effect is available for 5.1, stereo, or mono clips. The Multitap Delay effect has the following settings:

Delay 1-4 Specifies the amount of time between the original audio and its echo. The maximum is 2 seconds.

Feedback 1-4 Specifies the percentage of the delayed signal to be added back into the delay to create multiple decaying echoes.

Level 1-4 Controls the volume of each echo.

Mix Controls the amount of delayed and non delayed echo.

Notch effect

The Notch effect removes frequencies that are near the specified center. This effects is available for 5.1, stereo, or mono clips. The Notch effect has the following settings:

Center Specifies the frequency to be removed. If you are removing power-line hum, type a value that matches the power-line frequency used by the electrical system where the clip was recorded. For example, in North America and Japan type 60 Hz, and in most other countries type 50 Hz.

Q Specifies the range of frequencies to be affected. A low setting creates a narrow band; a high setting creates a wide band.

Parametric EQ effect

The Parametric Equalization effect increases or decreases frequencies near the specified Center frequency. This effect is available for 5.1, stereo, or mono clips. The Parametric Equalization effect has the following settings:

Center Specifies the frequency at the center of the specified range.

Q Specifies the range of frequencies to be affected. A low setting creates a narrow band; a high setting creates a wide band. The amount by which frequencies are adjusted is set in decibels by the Boost parameter. The Boost control specifies how much to adjust the specified Width in decibels.

Boost Specifies the amount by which to increase or decrease the range of frequencies (between –20 and +20 dB).

PitchShifter effect

The PitchShifter effect adjusts the pitch of the incoming signal. Use this effect to deepen high voices or vice versa. You can adjust each property using graphical controls in the Custom Setup view, or by changing values in the Individual Parameters view. This effect is available for 5.1, stereo, or mono clips.

The PitchShifter effect has the following settings:

Pitch Specifies the change in pitch in semitone steps. The adjustable range is between –12 and +12 semitones.

Fine Tune Determines the fine tuning between the semitone grid of the Pitch parameter.

Formant Preserve Prevents formants in the audio clip from being affected. For example, use this control when increasing the pitch of a high voice to prevent it from sounding cartoon-like.

Reverb effect

The Reverb effect adds ambience and warmth to an audio clip by simulating the sound of the audio playing in a room. Use the graphical controls in the Custom Setup view, or adjust values in the Individual Parameters view. This effect is available for 5.1, stereo, or mono clips.

The Reverb effect has the following settings:

Pre Delay Specifies the time between the signal and the reverberation. This setting correlates to the distance a sound travels to the reflecting walls and back to the listener in a live setting.

Absorption Specifies the percentage in which the sound is absorbed.

Size Specifies the size of the room as a percentage.

Density Specifies the density of the reverb "tail." The Size value determines the range in which you can set Density.

Lo Damp Specifies the amount of dampening for low frequencies (in decibels). Dampening lower frequencies prevents the reverb from rumbling or sounding muddy.

Hi Damp Specifies the amount of dampening of high frequencies (in decibels). Low settings make the reverb sound softer.

Mix Controls the amount of reverb.

Swap Channels effect

The Swap Channels effect switches the placement of the left and right channel information. Apply to stereo clips only.

Treble effect

The Treble effects lets you increase or decrease higher frequencies (4000 Hz and above). The Boost control specifies the amount, measured in decibels, to increase or decrease. This effect is available for 5.1, stereo, or mono clips.

Volume effect

Use the Volume effect in place of the Fixed Volume effect if you want to render Volume before other Standard effects.The Volume effect creates an envelope for a clip so that you can increase the audio level without clipping. Clipping occurs when the signal exceeds the dynamic range that's acceptable for your hardware, often resulting in distorted audio. Positive values indicate an increase in volume; negative values indicate a decrease in volume. The Volume effect is available for clips only in 5.1, stereo, or mono tracks.

Chapter 15: Compositing

Transparency (masks, alpha channels)

About transparency

To create a composite from multiple images, parts of one or more of the images must be transparent. You can use *alpha channels*, *masks*, *mattes*, and *keying* to define which parts of an image are transparent and which parts of an image will be used to obscure parts of another image. By manipulating transparency and choosing blending modes, you can create a variety of visual effects.

About alpha channels and mattes

Color information is contained in three channels: red, green, and blue. In addition, an image can include an invisible fourth channel, called an *alpha channel*, that contains transparency information.
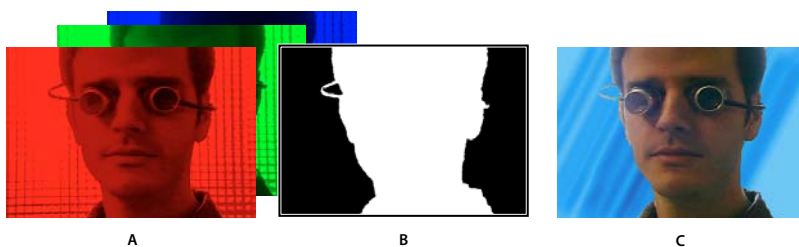
Channels at a glance
A. Separated color channels B. Alpha channel C. All channels viewed together

An alpha channel provides a way to store both images and their transparency information in a single file without disturbing the color channels.

When you view the alpha channel in the After Effects Composition panel or the Adobe Premiere Pro Monitor panel, white indicates complete opacity, black indicates complete transparency, and shades of gray indicate partial transparency.

A *matte* is a layer (or any of its channels) that defines the transparent areas of that layer or another layer. White areas define what is opaque, and black areas define what is transparent. An alpha channel is often used as a matte, but you can use a matte other than the alpha channel when you have a channel or layer that defines the desired area of transparency better than the alpha channel does, or in cases where the source image does not include an alpha channel.

Many file formats can include an alpha channel, including Adobe Photoshop, ElectricImage, TGA, TIFF, EPS, PDF, QuickTime (saved at a bit depth of Millions Of Colors+), and Adobe Illustrator. For Adobe Illustrator EPS and PDF files, After Effects automatically converts empty areas to an alpha channel.

About straight and premultiplied channels

Files with alpha channels fall into two categories: straight and premultiplied. Although the alpha channels are the same, the color channels differ.

With *straight* (or *unmatted*) channels, transparency information is only stored in the alpha channel, not in any of the visible color channels. With straight channels, the effects of transparency are not visible until the image is displayed in an application that supports straight channels.

With *premultiplied* (or *matted*) channels, transparency information is stored in the alpha channel and also in the visible RGB channels, which are multiplied with a background color. The colors of semitransparent areas, such as feathered edges, are shifted toward the background color in proportion to their degree of transparency.

Some software lets you specify the background color with which the channels are premultiplied; otherwise, the background color is usually black or white.

Straight channels retain more accurate color information than premultiplied channels. Premultiplied channels are compatible with a wider range of programs, such as Apple QuickTime Player. Often, the choice of whether to use images with straight or premultiplied channels has been made for you when you receive the assets that you will be editing and compositing. Fortunately, Adobe Premiere Pro and After Effects recognize both straight and premultiplied channels, so either type will produce satisfactory results for most projects.

About keying

Keying is defining transparency by a particular color value (with a color key or chroma key) or brightness value (with a luminance key) in an image. When you *key out* a value, all pixels that have similar colors or luminance values become transparent.

Keying makes it easy to replace a background of a consistent color or brightness with another image, which is especially useful when working with objects too complex to mask easily. The technique of keying out a background of a consistent color is often called *bluescreening* or *greenscreening*, although you do not have to use blue or green; you can use any solid color for a background.

Difference keying defines transparency with respect to a particular baseline background image. Instead of keying out a single-color screen, you can key out an arbitrary background.

Compositing video

About compositing

Compositing is the process of creating a compound image by superimposing one or more clips on another. You can achieve this result in several ways: by applying keys, by using alpha channels (in clips that have them), by using the opacity effect, and by simply scaling an image to reveal underlying images. All of these methods, except scaling, require that part of a clip be transparent.

> *After Effects, another program in Production Studio, gives you a greatly expanded range of compositing tools. You can easily import composites made in After Effects into Adobe Premiere Pro.*

When part of a clip is transparent, transparency information is stored in its *alpha channel*. You can apply any combination of *opacity, masks, mattes,* and *keying* to modify the alpha channel. This partially or totally hides areas of a clip. Adobe Premiere Pro refers to transparent areas using the following terms:

Alpha channel   Defines transparent areas for the clip that contains the channel. An alpha channel is an extra channel in addition to the visible color channels (such as RGB). While the alpha channel indicates transparency, the channel itself is usually hidden. With imported items, an alpha channel provides a way to store both the clip and its transparency information in a single file without disturbing the footage item's color channels. You can also ignore an existing alpha channel and use Adobe Premiere Pro transparency effects to create a new one. When you view the

alpha channel in the Program Monitor, white areas indicate opacity, black indicates transparency, and gray indicates partial transparency. Because an alpha channel uses shades of gray to store transparency information, some effects can apply a grayscale image (or the luminosity values of a color image) to an alpha channel.

Mask Describes the process of modifying an alpha channel; sometimes used as another word for *alpha channel*.

Matte Defines or modifies the transparent areas of its clip or another clip. A matte can be a file or channel. You might use a matte when you have a channel or clip that defines the desired area of transparency better than the alpha channel, or when a clip doesn't include an alpha channel.

Keying Defines transparency by a particular color (chroma key) or brightness value (luminance key) in an image. Pixels matching the key color become transparent. Use keying to remove a background of a uniform color, such as a blue or green screen.

Separated color channels (left), the alpha channel (center), and all color channels viewed together (right)

See also

"About transparency" on page 354

"About alpha channels and mattes" on page 354

"To choose a display mode" on page 101

Compositing clips

Each video track in the Timeline panel contains an alpha channel that stores transparency information. All video track frames are completely transparent except where you've added opaque content such as video, still images, or titles. You can make areas of opaque content partially or completely transparent by adjusting a clip's alpha channel or applying a matte or key to a clip. Clips on upper tracks cover clips on lower tracks except where alpha channels indicate transparency. Adobe Premiere Pro composites clips from the lowest track up, and the final video frame is a composite of clips on all visible tracks. Areas where all tracks are empty or transparent appear black. If necessary, you can use the File > Interpret Footage command to change how Adobe Premiere Pro interprets a clip's alpha channel throughout a project.

Keep the following guidelines in mind when compositing clips and tracks:

• If you want to apply the same amount of transparency to an entire clip, simply adjust the clip's opacity in the Effect Controls panel.

• It's often most efficient to import a source file already containing an alpha channel defining the areas that you want to be transparent. Because the transparency information is stored with the file, Adobe Premiere Pro preserves and displays the clip with its transparency in all sequences where you use the file as a clip.

• If a clip's source file doesn't contain an alpha channel, you must manually apply transparency to individual clip instances where you want transparency. You can apply transparency to a video clip in a sequence by adjusting clip opacity or by applying effects.

• Applications such as Adobe After Effects, Adobe Photoshop, and Adobe Illustrator can save clips with their alpha channels when the alpha channel is present in the original file and the file is saved to a format that supports an alpha channel. In these applications, you can display a checkerboard pattern that indicates transparency so that you can distinguish transparent areas from opaque white areas.

See also

"About transparency" on page 354

"Adjusting the opacity of clips" on page 357

"To apply a key to a clip" on page 359

To set how an alpha channel is interpreted

1 Select a clip in the Project panel.

2 Choose File > Interpret Footage or right-click and choose Interpret Footage from the context menu.

3 In the Interpret Footage dialog box, select any of the following Alpha Channel options and click OK:

Ignore Alpha Channel Ignores the alpha channel in the clip.

Invert Alpha Channel Reverses the light and dark areas of the alpha channel. This swaps the transparent and opaque areas.

If you have difficulty identifying which parts of a clip are transparent, choose Alpha from the Program view menu in the Program Monitor. Another way to see areas of transparency is to add a bright solid color matte on a track below the image you are keying.

See also

"About alpha channels and mattes" on page 354

"To create a solid color matte" on page 368

Adjusting the opacity of clips

By default, clips on tracks appear at full (100%) opacity except for areas marked by a clip's mask, matte, or alpha channel. Make an entire clip more transparent by setting an opacity value below 100%. When a clip's opacity value is set to less than 100%, clips on lower tracks may be visible. At 0% opacity, the clip is completely transparent. If no clips are stacked below a partially transparent clip, the sequence's black background becomes visible. You can set a selected clip's opacity in the Effect Controls panel or Timeline panel, and you can fade a clip down or up over time by animating opacity.

Rendering order affects how opacity interacts with visual effects. The Video Effects list is rendered first, then geometric effects such as Motion are rendered, and then alpha channel adjustments are applied. Within each effects group, effects are rendered from the top down in the list. Because Opacity is in the Fixed Effects list, it renders after the Video Effects list. If you want opacity to render earlier or later than certain effects, or if you want to control additional opacity options, apply the Alpha Adjust video effect.

If you simply want to create a fade to black, consider applying a transition such as Dip To Black to the clip instead of animating opacity keyframes manually.

See also

"To activate keyframing" on page 234

"Alpha Adjust effect" on page 317

To specify clip opacity in the Effect Controls panel

1 Select a clip in the Timeline panel.

2 In the Effect Controls panel, click the triangle next to the Opacity effect to expand its settings.

3 (Optional) If you're animating the Opacity effect over time, click the Toggle Animation icon ⏱ and make sure the current-time indicator is at the time you want in the Effect Controls timeline.

4 Do one of the following:

• Enter a new opacity value.

• Click the triangle next to the Toggle Animation icon to expand the settings controls and drag the Opacity slider.

If you click the Toggle Animation icon in step 3, a keyframe is created in the Effect Controls timeline where the current-time indicator is positioned.

5 (Optional) If you are animating the clip opacity over time, move the current-time indicator and do any of the following to make an adjustment:

• Enter a value for the setting.

• Drag the Opacity slider to specify a value.

When you make the adjustment, a new keyframe and a graph representing the adjustment appear in the Effect Controls timeline. You can make further adjustments by entering a value, dragging the Opacity slider, or dragging an Opacity handle on the graph. You can also adjust the interpolation between keyframes by editing the keyframe graph. Repeat step 5 as needed.

See also

"To edit keyframe graphs in the Effect Controls panel" on page 238

"About keyframes" on page 230

To specify clip opacity in the Timeline panel

You can adjust opacity for a clip in the Effect Controls panel using the same method you would use to set any other effect property. However, it may be simpler sometimes to adjust these effects in the Timeline panel.

1 Expand a track's view, if necessary, by clicking the triangle next to the track name to expand its options.

2 If necessary, click the Show Keyframes button ◌ , ◌ , and choose Show Opacity Handles from the pop-up menu. A graph appears in all the clips of the track.

Note: If no keyframes exist on the graph, the graph appears as a straight horizontal line across the entire track.

3 In the Timeline panel, do one of the following:

• Ctrl-click the Selection tool and drag the graph up or down.

• Use the Pen tool to drag the graph up or down.

The opacity value and current time appear as a tool tip as you drag.

4 (Optional) If you're animating the Opacity effect over time, Ctrl-click the graph with the Pen tool at the time you want in the Timeline panel. A keyframe is created where you clicked. Repeat step 5 as needed.

💡 *After you create one or more keyframes on the graph, you can move the keyframes or Opacity handles with either the Selection tool or the Pen tool. To adjust the smoothness of the animation change the keyframe interpolation from linear to Bezier. See also "Controlling change using Bezier keyframe interpolation" on page 243.*

See also

"About the Effect Controls panel" on page 255

"To activate keyframing" on page 234

"Working with keyframes" on page 230

Defining transparent areas with keys

To apply a key to a clip

A *key* effect defines transparent areas in a clip based on values such as color or brightness. Use color-based keys to knock out a background, brightness keys to add texture or special effects, alpha channel keys to modify a clip's alpha channel, and matte keys to add traveling mattes or apply other clips as mattes.

1 In the Effects panel, click the triangle to expand the Video Effects bin and then click the triangle to expand the Keying bin.

2 Drag a key to a clip in the Timeline panel.
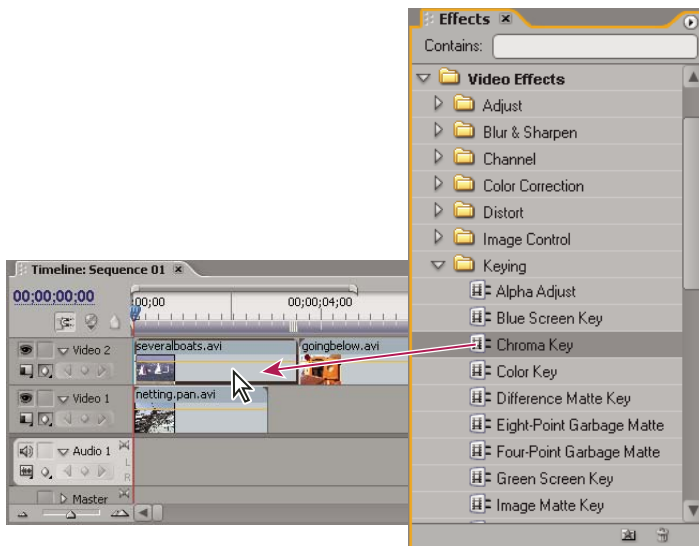
Dragging a key from the Effects panel to a clip in the Timeline panel

3 In the Video Effects section of the Effect Controls panel, click the triangle next to the key effect name to expand its settings.

4 (Optional) If you're applying the Chroma Key or the RGB Difference Key, make sure the Color setting option shows and do any of the following to select a color to define clip transparency:

• Click the color swatch and use the Adobe Color Picker to select a color, and then click OK to close the Color Picker.

• Select the Eyedropper icon and click anywhere on your computer's desktop to select a color.

The selected color for the Chroma Key or Difference Key appears in the swatch next to the Eyedropper icon.

5 Adjust the key's settings. If you're not animating the keying effect over time, you can skip steps 6 and 7.

Note: For information about key settings, see the topic for the specific key.

6 (Optional) If you're animating the keying effect over time, make sure the current-time indicator is at the position you want and then click the Toggle Animation icon ⏱ for the setting you're changing over time. A keyframe appears in the Effect Controls timeline.

7 (Optional) Move the current-time indicator again and do any of the following to make an adjustment:

• Enter a value for the setting.

• Click the triangle next to the setting name to expand its settings and drag the slider to specify a value. You can also drag a point in the graph in the Effect Controls panel.

A new keyframe appears in the Effect Controls panel when you adjust the setting. You can also adjust the interpolation between keyframes by editing the keyframe graph in the Effect Controls panel. Repeat step 7 as needed.

💡 *To more effectively evaluate the settings of a key effect, view the clip's composite view and the clip's alpha channel simultaneously. Choose New View from the Program Monitor menu, and then choose Alpha from the new Program Monitor menu.*

See also

Using the Chroma Key

The Chroma Key effect specifies which color or range of colors in the clip becomes transparent. You can use this key for a scene shot against a monochromatic screen, such as a blue or green screen.

The following Chroma Key settings are adjusted in the Effect Controls panel:

Similarity Broadens or reduces the range of the target color that will be made transparent. Higher values increase the range.

Blend Blends the clip you are keying out with the underlying clip. Higher values blend more of the clip.

Threshold Controls the amount of shadows in the range of color you keyed out. Higher values retain more shadows.

Cutoff Darkens or lightens shadows. Drag to the right to darken shadows, but do not drag beyond the Threshold slider; doing so inverts gray and transparent pixels.

Smoothing Specifies the amount of anti-aliasing that Adobe Premiere Pro applies to the boundary between transparent and opaque regions. Anti-aliasing blends pixels to produce softer, smoother edges. Choose None to produce sharp edges, with no anti-aliasing. This option is useful when you want to preserve sharp lines, such as those in titles. Choose Low or High to produce different amounts of smoothing.

Mask Only Displays only the clip's alpha channel. Black represents transparent areas, white represents opaque areas, and gray represents partially transparent areas.

See also

"About keying" on page 355

About the Color Key

The Color Key effect keys out all image pixels that are similar to a specified key color. This effect modifies only the alpha channel of a layer.

When you key out a color value in a clip, that color or range of colors becomes transparent for the entire clip. Control the range of transparent colors by adjusting the tolerance level. You can also feather the edges of the transparent area to create a smooth transition between the transparent and opaque areas.

See also

"About keying" on page 355

To key out a single color

1 Select a clip in the Timeline panel.

2 Apply the Color Key effect to the clip.

3 In the Effect Controls panel, click the triangle to expand the Color Key effect.

4 Do one of the following to specify the key color:

• Click the Key Color swatch to open the Adobe Color Picker, select a color, and then click OK.

• Click the Eyedropper icon, and then click a color on the computer screen.

5 Drag the Color Tolerance slider to specify the range of color to key out. Lower values key out a smaller range of colors near the key color. Higher values key out a wider range of color.

6 Drag the Edge Thin slider to adjust the width of the keyed area's border. Positive values enlarge the mask, increasing the transparent area. Negative values shrink the mask, decreasing the transparent area.

7 Drag the Edge Feather slider to specify the softness of the edge. Higher values create a softer edge but take longer to render.

Using the RGB Difference Key

The RGB Difference Key is a simpler version of the Chroma Key. It lets you select a range for the target color, but you cannot blend the image or adjust transparency in grays. Use the RGB Difference Key for a scene that is brightly lit and contains no shadows, or for rough cuts that don't require fine adjustments.

Note: The Difference Matte Key uses a matte to define the alpha channel much as the RGB Difference Key uses a color. For more information, see "Difference Matte Key effect" on page 318.

The following RGB Difference Key settings are adjusted in the Effect Controls panel:

Color Specifies the color in the video that will be made transparent by the mask.

Similarity Broadens or reduces the range of the target color that will be made transparent. Higher values increase the range.

Smoothing Specifies the amount of anti-aliasing (softening) that Adobe Premiere Pro applies to the boundary between transparent and opaque regions. Choose None to produce sharp edges, with no anti-aliasing. This option is useful when you want to preserve sharp lines, such as those in titles. Choose Low or High to produce different amounts of smoothing.

Mask Only Displays only the clip's alpha channel. Black represents transparent areas, white represents opaque areas, and gray represents partially transparent areas.

Drop Shadow Adds a 50% gray, 50% opaque shadow offset 4 pixels down and to the right from the opaque areas of the original clip image. This option works best with simple graphics such as titles.

See also

Blue Screen Key and Green Screen Key

The Blue Screen Key and Green Screen Key create transparency from true chroma blue and true chroma green. Use these keys to key out well-lit blue or green screens when creating composites.

The following Blue Screen and Green Screen Key settings are adjusted in the Effect Controls panel:

Threshold Sets the levels of blue or green that determines transparent areas in the clip. Dragging the Threshold slider to the left increases the amount of transparency. Use the Mask Only option to view the black (transparent) areas as you move the Threshold slider.

Cutoff Sets the opacity of the nontransparent areas specified by the Threshold setting. Dragging the Cutoff slider to the right increases the opacity. Use the Mask Only option to view the white (opaque) areas as you drag the Cutoff slider.

Smoothing Specifies the amount of anti-aliasing (softening) applied to the boundary between transparent and opaque regions. Choose None to produce sharp edges, with no anti-aliasing. This option is useful when you want to preserve sharp lines, such as those in titles. Choose Low or High to produce different amounts of smoothing.

Mask Only Displays only the clip's alpha channel. Black represents transparent areas, white represents opaque areas, and gray represents partially transparent areas.
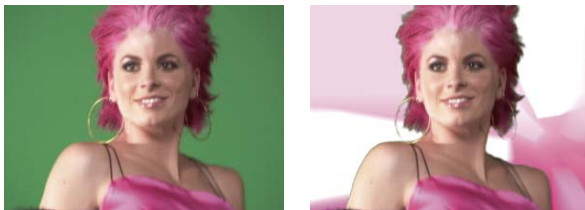
A subject is photographed against a green background (left). The Green Screen Key effect is applied (right) to superimpose the subject over the underlying track.

See also

Using the Non Red Key

The Non Red Key creates transparency from green or blue backgrounds. This key is similar to the Blue Screen and Green Screen Keys, but it also lets you blend two clips. In addition, the Non Red Key helps reduce fringing around the edges of nontransparent objects. Use the Non Red Key to key out green screens when you need to control blending, or when the Blue Screen or Green Screen Keys don't produce satisfactory results.

The following Non Red Key settings are adjusted in the Effect Controls panel:

Threshold Sets the levels of blue or green that determine transparent areas in the clip. Dragging the Threshold slider to the left increases the amount of transparency. Use the Mask Only option to view the black (transparent) areas as you move the Threshold slider.

Cutoff Sets the opacity of nontransparent areas specified by the Threshold slider. Higher values increase transparency. Drag to the right until the opaque area reaches a satisfactory level.

Defringing Removes residual green or blue screen color from the edges of the opaque areas of a clip. Choose None to disable defringing. Choose Green or Blue to remove a residual edge from green-screen or blue-screen footage, respectively.

Smoothing Specifies the amount of anti-aliasing (softening) that Adobe Premiere Pro applies to the boundary between transparent and opaque regions. Choose None to produce sharp edges, with no anti-aliasing. This option is useful when you want to preserve sharp lines, such as those in titles. Choose Low or High to produce different amounts of smoothing.

Mask Only Displays only the clip's alpha channel. Black represents transparent areas, white represents opaque areas, and gray represents partially transparent areas.

See also

"About keying" on page 355

About the Luma Key

The Luma Key creates transparency for darker values in the image, leaving brighter colors opaque. Use the Luma Key to create a subtle superimposition or to key out dark areas.

Adjust the following settings as necessary:

Threshold Specifies the range of darker values that are transparent. Higher values increase the range of transparency.

Cutoff Sets the opacity of nontransparent areas specified by the Threshold slider. Higher values increase transparency.

You can also use the Luma Key to key out light areas by setting Threshold to a low value and Cutoff to a high value.

See also

"About keying" on page 355

Multiply Key and Screen Key

The Multiply Key creates transparency in the bright areas of the clip. Conversely, the Screen Key creates transparency in the dark areas of the clip. Like the Luma Key, the Multiply and Screen Keys are most effective when the image that you are keying contains highly contrasting dark and light areas.

The following Multiply Key and Screen Key settings are adjusted in the Effect Controls panel:

Opacity Reduces the opacity of the clip being keyed. Drag the control to the left to reduce the clip's opacity.

Cutoff Determines the luminance level required for an area to be transparent. Drag the control to the left to decrease the required luminance level.

See also

"About keying" on page 355

Creating transparency and solid colors with mattes

About mattes

A *matte* is a still image that determines where to apply an effect to a clip. You can use matte keys to create superimpositions, including traveling mattes. For information on using the mattes, see the topic for a specific matte key.

See also

"About alpha channels and mattes" on page 354

Using the Image Matte Key

The Image Matte Key determines transparent areas based on a matte image's alpha channel or brightness values. To get the most predictable results, choose a grayscale image for your image matte, unless you want to alter colors in the clip. Any color in the image matte removes the same level of color from the clip you are keying. For example, white areas in the clip that correspond to red areas in the image matte appear blue-green (since white in an RGB image is composed of 100% red, 100% blue, and 100% green); because red also becomes transparent in the clip, only blue and green colors remain at their original values.

A still image used as a matte (left) defines transparent areas in the superimposed clip (center), revealing background clip (right).

To composite clips using alpha channels or brightness values

1 Add the clip (used as a background) to a video track in the Timeline panel.

2 Add the clip you want to superimpose to any track higher than the track containing the background clip. This is the clip revealed by the track matte.

Be sure the superimposed clip overlaps the background clip in the Timeline panel.

3 In the Effects panel, click the triangle to expand the Video Effects bin and then click the triangle to expand the Keying bin.

4 Drag the Image Matte Key to the superimposed clip in the Timeline panel.

5 In the Timeline panel, select the superimposed clip.

6 In the Effect Controls panel, click the triangle to expand the Image Matte Key settings.

7 Click the Setup button ⇢▤, browse to the image being used as the matte, and then click Open to select the image.

8 (Optional) If you're animating the Image Matte Key over time, make sure that the current-time indicator is in the position you want. Click the Toggle Animation icons for the settings you adjust.

9 Click the Composite Using menu and choose one of the following:

Matte Alpha Composites the clips using the alpha channel values of the image matte you selected in step 7.

Matte Luma Composites the clips using the luminance values of the image matte you selected in step 7.

10 (Optional) Select the Reverse option to swap the areas that are opaque and transparent.

11 (Optional) If you're animating the Image Matte Key, move the current-time indicator either in the Effect Controls panel or Timeline panel and change the Image Matte Key settings.

A new keyframe appears in the Effect Controls timeline when you change the settings. Repeat this step as needed. You can also adjust the interpolation between keyframes by editing the keyframe graph.

See also

"About keyframes" on page 230

"About alpha channels and mattes" on page 354

"To edit keyframe graphs in the Effect Controls panel" on page 238

About the Difference Matte Key

The Difference Matte Key creates transparency by comparing a specified still image with a specified clip and then eliminating areas in the clip that match those in the image. This key can be used to create special effects. Depending on the clip, it's possible to use Difference Matte Key to key out a static background and replace it with another still or moving image.

You can create the matte by saving a frame from a clip that shows the static background before the moving object enters the scene. For best results, neither the camera nor anything in the background should move.

The following Difference Matte Key settings are adjusted in the Effect Controls panel:

Similarity Broadens or reduces the range of color that will be made transparent. Higher values increase the range.

Smoothing Specifies the amount of anti-aliasing (softening) that Adobe Premiere Pro applies to the boundary between transparent and opaque regions. Choose None to produce sharp edges, with no anti-aliasing. This option is useful when you want to preserve sharp lines, such as those in titles. Choose Low or High to produce different amounts of smoothing.

Drop Shadow Adds a 50% gray, 50% opaque shadow offset 4 pixels down and to the right from the opaque areas of the original clip image. This option works best with simple graphics such as titles.

Reverse Inverts the values of the matte.

Mask Only Displays only the clip's alpha channel. Black represents transparent areas, white represents opaque areas, and gray represents partially transparent areas.

Note: The RGB Difference Key uses color to define transparency much as the Difference Matte Key uses a still image.

See also

"About keying" on page 355

"About alpha channels and mattes" on page 354

To replace a static background behind moving objects
1 Find a frame of your clip that consists only of the static background.

2 Save this frame as an image file.

3 Place the video clip on a track in the Timeline panel.

4 In the Effects panel, expand the Video Effects bin and then the Keying bin.

5 Drag the Difference Matte effect to the video clip.

6 Click the Setup button ⇥▤, browse to the frame you saved, and then click Open to select the image.

7 (Optional) If you're animating the Difference Matte Key over time, make sure that the current-time indicator is in the position you want. Click the Toggle Animation icons for the settings you adjust.

8 Select the Reverse option to invert the values of the matte and key out the static background.

9 Adjust the other settings as needed:

10 (Optional) If you're animating the Difference Matte Key, move the current-time indicator either in the Effect Controls panel or Timeline panel and change the Image Matte Key settings.

A new keyframe appears in the Effect Controls timeline when you change the settings. You can also adjust the interpolation between keyframes by editing the keyframe graph. Repeat this step as needed.

See also

"To export a still image" on page 380

"To edit keyframe graphs in the Effect Controls panel" on page 238

Using the Track Matte Key

The Track Matte Key reveals one clip (background clip) through another (superimposed clip), using a third file as a matte that creates transparent areas in the superimposed clip. This effect requires two clips and a matte, each placed on its own track. White areas in the matte are opaque in the superimposed clip, preventing underlying clips from showing through. Black areas in the matte are transparent, and gray areas are partially transparent.

A matte containing motion is called a *traveling matte* or *moving matte*. This matte consists of either motion footage, such as a green-screen silhouette, or a still image matte that has been animated. You can animate a still by applying the Motion effect to the matte. If you animate a still image, consider making the matte frame size larger than the project frame size so that the edges of the matte don't come into view when you animate the matte.

Because the Track Matte Key can be applied to a video clip, the matte can change over time.

You can create mattes in various ways:

• Use the Title panel to create text or shapes (grayscale only), save the title, and then import the file as your matte.

• Apply the Chroma, RGB Difference, Difference Matte, Blue Screen, Green Screen, or Non Red Key to any clip and then select the Mask Only option.

• Use Adobe Illustrator or Adobe Photoshop to create a grayscale image and import it into Adobe Premiere Pro.

See also

"About keyframes" on page 230

"Working with keyframes" on page 230

"About alpha channels and mattes" on page 354

To create transparency in a superimposed clip

1 Add the background clip to a track in the Timeline panel.

2 Add the clip you want to superimpose to any track higher than the track containing the background clip. This is the clip revealed by the track matte.

3 Add the track matte clip to a third track above the tracks with the background and superimposed clips.

💡 *If you need to add a new track to the sequence, drag the track matte clip to the empty area above the highest video track in the Timeline panel. A new track is automatically created.*

4 In the Effects panel, click the triangle to expand the Video Effects bin and then click the triangle to expand the Keying bin.

5 Drag the Track Matte Key to the superimposed clip.

6 In the Effect Controls panel, click the triangle next to the Track Matte Key name to expand its settings.

7 Click the Matte setting pop-up menu with the down-pointing triangle and choose the video track containing the track matte clip.

8 (Optional) If you're animating the Track Matte Key over time, make sure that the current-time indicator is in the position you want. Click the Toggle Animation icons of the settings you want to adjust.

9 Click the Composite Using pop-up menu and choose one of the following:

Matte Alpha Composites using the track matte clip's alpha channel values.

Matte Luma Composites using the track matte clip's luminance values.

10 (Optional) Select the Reverse option to invert the values of the track matte clip.

💡 *To retain the original colors in the superimposed clip, use a grayscale image for the matte. Any color in the matte removes the same level of color from the superimposed clip.*

11 (Optional) If you're animating the Track Matte, move the current-time indicator either in the Effect Controls panel or Timeline panel and change the Track Matte Key settings.

A new keyframe appears in the Effect Controls timeline when you change the settings. You can also adjust the interpolation between keyframes by editing the keyframe graph. Repeat this step as needed.

See also

"About alpha channels and mattes" on page 354

"To edit keyframe graphs in the Effect Controls panel" on page 238

To mask out objects with garbage mattes

Sometimes the subject of a scene is properly keyed except for undesired objects. Use a *garbage matte* to mask out those objects. Depending on the shape of the mask, you can use the Four-Point Garbage Matte, Eight-Point Garbage Matte, or Sixteen-Point Garbage Matte. More points let you define more complex mask shapes.

The Garbage Matte keying effect provides settings that represent the *x* and *y* pixel coordinates of each point of the garbage matte, measured from the top left corner of the frame. Changes appear in the Preview view of the Program Monitor.

The microphone (left) is masked out by repositioning image handles in the Preview view of the Program Monitor (center), creating a garbage matte that is then keyed and superimposed over a background (right).

1 In the Timeline panel, place the clip you want to superimpose in a track above the one containing the background clip.

2 In the Effects panel, click the triangle to expand the Video Effects bin and then click the triangle to expand the Keying bin.

3 Drag either the Eight-Point Garbage Matte, the Four-Point Garbage Matte, or the Sixteen-Point Garbage Matte effect to the superimposed clip.

Your choice of garbage matte depends on the number of points needed for mask shape.

4 In the Effect Controls panel, click the triangle next to the Garbage Matte name to expand the settings.

5 (Optional) If you're animating the Garbage Matte Key over time, make sure that the current-time indicator is in the position you want. Click the Toggle Animation icons for the position settings you plan to adjust.

6 Do any of the following to adjust the mask shape:

• With the Garbage Matte effect selected in the Effect Controls panel, drag the Garbage Matte handles in the Program Monitor.

• Adjust the Garbage Matte point settings in the Effect Controls panel to specify the size and position of the garbage matte.

7 (Optional) If you're animating the Garbage Matte Key, move the current-time indicator either in the Effect Controls panel or the Timeline panel and then change the Garbage Matte handle positions in the Program Monitor or adjust the settings in the Effect Controls panel.

A new keyframe appears in the Effect Controls timeline when you move the handles in the Program monitor or change the settings in the Effect Controls panel. You can also adjust the interpolation between keyframes by editing the keyframe graph. Repeat this step as needed.

See also

"About alpha channels and mattes" on page 354

"To edit keyframe graphs in the Effect Controls panel" on page 238

To create a solid color matte

You can create a full-frame matte of a solid color to use as a clip. Solid background mattes can be used for titles.

1 Select the Project panel.

2 Choose File > New > Color Matte.

3 Select a color from the Adobe Color Picker and click OK.

4 In the Choose Name dialog box, type a name for the new matte and click OK.

The matte appears as a still image in the Project panel.

Brightly colored mattes can serve as temporary backgrounds to help you see transparency more clearly while you adjust a key effect.

To remove a black or white matte

If you imported a clip that contains a solid black or white matte that's premultiplied (merged into the RGB channels instead of stored in the alpha channel), you can remove the black or white background.

1 In the Timeline panel, select the clip containing the matte you want to remove.

2 In the Effects panel, click the triangle to expand the Video Effects bin and then click the triangle to expand the Keying bin.

3 Drag the Remove Matte effect to the clip containing the matte.

4 (Optional) If you're animating the Remove Matte effect over time, make sure that the current-time indicator is in the position you want. Click the Toggle Animation icon next to the Matte Type setting.

5 Choose either White or Black for the Matte Type setting.

6 (Optional) If you're animating the Remote Matte effect, move the current-time indicator either in the Effect Controls panel or the Timeline panel and then change the Matte Type setting in the Effect Controls panel.

A new keyframe appears in the Effect Controls timeline when you move the handles in the Program Monitor or change the settings in the Effect Controls panel. You can also adjust the interpolation between keyframes by editing the keyframe graph. Repeat this step as needed.

See also

"About alpha channels and mattes" on page 354

"To edit keyframe graphs in the Effect Controls panel" on page 238

Chapter 16: Video output

Exporting basics

About export

When you have finished editing, you can export the final sequence in the form best suited for your viewing audience. You can use Adobe Premiere Pro to export a clip or sequence to any of the following media:

- Videotape
- DVD-video disks or files
- Movie files
- Sequential still-image files
- Single still-image files
- Audio-only files

Alternatively, you can export a data file that describes the project and enables you to recreate it either with related media or by using another editing system. These export options include the following:

- Edit Decision List (EDL) files
- Advanced Authoring Format (AAF) files

Using the Project Manager feature, you can create a version of your project, called a *trimmed project*, that references only the material essential to your sequences. Trimmed projects are saved under a unique name in the standard Premiere Pro project file format (.prproj).

To facilitate a collaborative workflow, you can use the Clip Notes feature to share comments on a project in progress. Clip Notes are embedded in a Portable Document (PDF) file.

Note: When exporting a clip or a sequence as a movie file, you can choose between two export methods: the Export Movie command and the Export Adobe Media Encoder command. Which method is best depends on your output goals. (See "Exporting video as a file" on page 378.)

Using video files in other applications

Adobe Premiere Pro exports to many formats that are readable by other applications. When preparing to export to a video file for use in other video-editing or special-effects software, answer the following questions:

- Which file formats and compression methods does the other software import? This helps determine which format you will use to export.

- Are you transferring across computer platforms? This may constrain the choice of file formats and compression methods. Consider using high-quality, cross-platform codecs, such as QuickTime Motion JPEG A or B, or the Animation codec.

- Are you superimposing the clips over other clips? If so, preserve alpha channel transparency by exporting a format that supports 32-bit color depth (Millions of Colors +), such as Apple Animation, Apple None, or Uncompressed Windows AVI.

- Are you adding special effects or processing the video and audio in other ways? Processing tends to degrade image and sound quality, so it's usually best to use the highest quality source material possible. If maintaining quality outweighs other considerations (such as limiting file size and data rate), then choose a high-quality codec, or one that doesn't use compression at all.

- Do you want to paint on frames? If so, you can export frames as a numbered sequence of individual still-image files, and edit each file in Photoshop.

- Do you want to use a single frame as a still image? If so, see "To export a still image" on page 380.

Exporting to various media types

It is important to understand the requirements of the media that will store and deliver your video project. When you import and export using the same media type (DV videotape, for example), exporting is a relatively straightforward task. However, when the media you used to import differs from the media you're exporting to, you must tailor your workflow accordingly.

Creating motion-picture film

If you intend to display your finished project on motion picture film, you should plan your workflow carefully. You may employ a *matchback* process, in which you shoot on film, transfer to video, and then conform the film negative to your edits. On the other hand, you may choose to shoot and edit using a video format (ideally, a high-definition format) and transfer the finished project to film. In any case, you will need to consider the important ways film and video formats differ—such as in their image resolutions and frame rates—and how to reconcile those differences.

For the production phase, you will need to consider the acquisition format that best suits your needs. During post-production, you may need to transfer the source footage to the appropriate format for editing, effects, and sound design (using programs such as Adobe Premiere Pro, Adobe After Effects, and Adobe Audition). When exporting from post-production software, you must determine the file settings appropriate to the film stock you will use, or decide how to best translate your editing decisions to film. If you choose to transfer video to film, it's likely you will employ a facility that can accomplish the transfer using a *film recorder*, a device that prints video frames to motion picture film frames. To determine the best course, consult the production and post-production facilities that will provide the services necessary to deliver the project on film before you begin.

Creating a video file for CD-ROM playback

If you want your audience to be able to play back your video and audio files on a CD-ROM drive (rather than a DVD player), you can record the file onto recordable CD media (known collectively as CD+/-R/RW). You must encode your files so that they do not exceed the storage capacity of the CD: 650 MB or 700 MB. However, to ensure that your files play back successfully, you must also encode them with your audience's hardware and software in mind. In other words, you may need to reduce a file's data rate not only to limit its size to a CD's capacity, but also to ensure smooth playback on a range of systems. This is particularly true if any of your intended viewers use older CD-ROM drives, such as single-speed and double-speed drives, or computers with older processors (CPUs). When choosing export settings, you can take the following steps to adjust the data rate and ensure smooth playback:

- Determine your audience's range of hardware and software configurations, and identify the limits of the least-capable configuration. This way, you can set the frame rate low enough for smooth playback, and retain as much quality as possible.

- Choose a file type and codec appropriate for the target audience. For example, for a cross-platform CD-ROM, you might specify a codec that works on both QuickTime and Windows Media players. Or you might select a codec designed for low data rates, such as Indeo, Cinepak, Sorenson, or MPEG-1.

- If necessary, reduce the frame size. Generally, it's best to specify a multiple of the full screen size, taking into account the pixel aspect ratio. For example, if the full screen size is 640 x 480 (square pixels), then try 320 x 240.

- If necessary, lower the frame rate. For example, full frame rate is approximately 30 fps (in NTSC); reducing the frame rate to 15 fps should reduce the data rate significantly without making the motion appear too choppy.

- If permitted by the codec, adjust the data rate and quality settings according to your output goal. For example, codecs like Cinepak and Sorenson let you adjust the amount of compression by specifying a quality or target data rate.

- If necessary, lower the color depth. This is particularly effective if the source video contains less than the full range of colors (known as 24-bit color, Millions of Colors, or True Color), or if the video will be shown using a monitor or software that displays a limited range of colors.

- Test the file by playing it on a system comparable to the least-capable system in your intended audience, and make adjustments accordingly.

Note: Because the midrange brightness, or gamma, of Mac OS and Windows differ, it's common to strike a balance between the two when adjusting the gamma of cross-platform movies.

Note: Applying a noise reduction filter can improve the appearance of video compressed with certain codecs, such as Cinepak. (See "Adobe Media Encoder Filters options" on page 390.)

Creating a video file for Video CD playback

Video CD (VCD) is a format that allows video to be played back in computers or players that support the Video CD standard. The advantage of Video CD is that it can be created using the proper software and a CD recorder; a DVD recorder isn't required. On the other hand, VCD quality is comparable to VHS—much lower than DVD quality. You can create Video CD files using MPEG1-VCD presets in the Adobe Media Encoder and then write the files to a recordable CD using a program that can create a VCD. However, because DVD media, recorders, and players are widespread and affordable, the demand and support for the VCD format is not as great as it was initially.

Creating video files for the web

In contrast to broadcast media or format-based delivery media such as DVD or videotape, the web accommodates a wider variety of video and audio standards and devices. While a growing number of viewers have a broadband Internet connection that can support relatively high-quality content, others may use equipment that supports only low data rates and, therefore, lower-quality content. For this reason, it's often necessary to export your project in a variety of formats, each tailored to different audience's viewing capabilities. The process is analogous to exporting to various physical media types, such as VHS and DVD, except that the choices are more varied.

The Adobe Premiere Pro and Adobe After Effects export settings contain presets for many bandwidth scenarios so that you can more easily match your output files with the viewing capabilities of your audience.

See also

"About the Adobe Media Encoder" on page 385

Understanding video file formats

Video file formats are developed to acquire, deliver, and distribute digital video and audio effectively. While more established formats, such as standard-definition video and DV encoded files, are familiar to most content creators, other formats are still emerging or include numerous variants. You should familiarize yourself with the specifications and requirements of any format to which you want to export your projects.

About high-definition (HD) video

High-definition video refers to any video format with higher resolution than *standard-definition (SD) video* formats, such as NTSC and PAL. There are many competing HD video formats, but the most common have a resolution of 1280 x 720 or 1920 x 1080, with a widescreen aspect ratio of 16:9.

HD video formats include interlaced and noninterlaced varieties. Typically, the highest-resolution formats are interlaced at the higher frame rates, because noninterlaced video at this resolution would require a prohibitively high data rate.

HD video formats are designated by their vertical resolution, scan mode, and frame or field rate (depending on the scan mode). For example, *1080i60* denotes interlaced scanning of 60 interlaced 1920 x 1080 fields per second, whereas *720p30* denotes progressive scanning of 30 noninterlaced 1280 x 720 frames per second. In both cases, the frame rate is approximately 30 frames per second.

Each program in Adobe Production Studio (Adobe Premiere Pro, Adobe After Effects, Adobe Audition, and Adobe Encore DVD) includes preset settings that are designed for working with various HD formats. Some of the most common HD video formats you may encounter include the following:

DVCPRO HD Panasonic's high-definition variant of its DVCPRO format, which also includes DVCPRO25 and DVCPRO50. Whereas DVCPRO25 and DVCPRO50 support data rates of 25Mbit/s and 50Mbit/s, respectively, DVCPRO HD supports a data rate of 100Mbit/s, from which it gets its other name, *DVCPRO100*.

HDCAM Sony's high-definition version of their Digital Betacam format. A variant called *HDCAM SR* uses a tape with a higher particle density to record video with greater color sampling and at higher bit rates. However, HDCAM SR is supported by decks only, and not camcorders.

HDV Developed jointly by several companies, HDV employs a form of MPEG-2 compression to enable high-definition video to be encoded on standard miniDV cassette media.

H.264 Also known as *MPEG-4 part 10* and *AVC* (*Advanced Video Coding*), H.264 can deliver video over a range of bitrates more efficiently than previous standards. For example, H.264 can deliver the same quality as MPEG-2 at half the data rate. H.264 is built into the Apple QuickTime 7 multimedia architecture, and will be supported by both of the rival next-generation DVD formats, HD-DVD and Blu-ray Disc.

Uncompressed HD Refers to high-definition video in an uncompressed format. Without compression to reduce the video's data rate, uncompressed video requires relatively fast computer processors, hard disks, and a specialized capture device.

WM9 HDTV Microsoft's high-definition delivery format is among numerous formats included in the Windows Media 9 (WM9) framework. By employing an aggressive compression scheme, WM9 HDTV permits high-definition video encoding and playback at relatively low data rates.

About web formats

Compared with other delivery media, web standards for delivering video and audio content are varied and inconsistent. Audiences view content over the web using a variety of software and hardware configurations that support a wide range of data bandwidths. For this reason, there are numerous codecs designed to make video web-friendly. With its export settings, Adobe Premiere Pro includes a number of presets that aid in formatting a movie suited for particular audiences, according to their system's capabilities. Many formats employ the following technologies:

Progressive downloadable video A *progressive download* movie can begin playing before it is completely downloaded. The movie player software (such as QuickTime Player, Windows Media Player, or Real Player) calculates how long it will take to download the entire movie, and then begins playback once enough of the movie has been downloaded so that it can play back uninterrupted.

Streaming video Streaming media delivers video over the web or other network without downloading a file to a hard disk, comparable to the way a traditional broadcast works. The bitrate—and therefore the quality—of streaming video is constrained by the bandwidth of the network or modem. When streaming video over the web, you can specify a higher bitrate if you know your audience has broadband Internet access, such as DSL or cable modem service. To provide versions tailored to the bitrate limits of different viewing scenarios, you can use the encoder's Audiences or Alternates feature. Streaming video is most effectively deployed over an office's intranet, where high-speed bandwidths are more common and consistent. Macromedia Flash Video, QuickTime, Windows Media, and RealMedia file types include streaming media formats.

Understanding video compression and data rate

Generally speaking, encoding video and audio to a digital format involves balancing quality with effective storage and playback. For this reason, most formats use compression to reduce file size and data rate. Without compression, a single frame of standard-definition video consumes nearly 1 MB (megabyte) of storage. At NTSC's frame rate of approximately 30 frames per second, uncompressed video requires a data rate of nearly 30 MB per second, and 45 seconds of footage consumes about 1 GB of storage. By comparison, a standard NTSC DV file's data rate is about 3.6 MB per second, and it takes about 5 minutes of footage to consume 1 GB of storage. Understanding the effects of compression on quality and data rate will help you select the best format and settings for the task at hand.

About compression

Compression is essential to reduce the size of movies that could otherwise be so that they can be stored, transmitted, and played back effectively. When exporting or rendering a movie file for playback on a specific type of device at a certain bandwidth, you choose a compressor/decompressor (also known as an encoder/decoder), or *codec,* to compress the information and generate a file readable by that type of device at that bandwidth.

A wide range of codecs is available; no single codec is the best for all situations. For example, the best codec for compressing cartoon animation is generally not efficient for compressing live-action video. When compressing a movie file, you can fine-tune it for the best-quality playback on a computer, video playback device, the web, or from a DVD player. Depending on which encoder you use, you may be able to reduce the size of compressed files by removing artifacts that interfere with compression, such as random camera motion and excessive film grain.

The codec you use must be available to your entire audience. For instance, if you use a hardware codec on a capture card, your audience must have the same capture card installed, or a software codec that emulates it.

For more information about compression, search for the Adobe DV Compression Primer (English only) on the Adobe website.

About compression keyframes

Compression keyframes are different from the keyframes that you use to control track or clip properties such as audio volume or clip rotation. Compression keyframes are automatically placed during export at regular intervals in the movie. During compression, they are stored as complete frames. The frames between the keyframes, called inter-mediate frames, are compared to the previous frame and only the changed data is stored. This process can greatly reduce file size, depending on the spacing of the keyframes. Fewer keyframes and more intermediate frames result in smaller file sizes but produce lower-quality images and motion. More keyframes and fewer intermediate frames result in significantly larger file sizes but produce higher-quality images and motion.

Choosing compression settings is a balancing act that varies depending on the type of video material, the target delivery format, and the intended audience. Often, the optimal compression setting is arrived at through trial and error.

About data rate

With some video codecs, you can specify the *data rate*, which controls the amount of video information that must be processed each second during playback. Specifying a data rate actually sets the maximum data rate, because the actual data rate varies depending on the visual content of each frame.

To maximize the quality of encoded video, set the data rate as high as the target delivery medium can support. If you plan to stream video to an audience using dial-up Internet access, this may be as low as 20 kilobits per second; however, if you plan to distribute video on DVD, it may be as high as 7 megabits per second. The data rate you specify depends on the purpose of the video. The following list describes data rate guidelines for some uses:

DVD production The data rate should maximize quality while fitting the entire program within the space available on the DVD. In Adobe Premiere Pro, the DVD data rate is automatically adjusted by the Adobe Media Encoder when you choose File > Export > Export To DVD.

Non-DV videotape production The data rate should fall within the capabilities of the computer and hard disk that perform the final playback to tape.

Hard-disk playback If the final video will be played back from a hard disk, determine the typical data transfer rate of your audience's hard disks and set the data rate accordingly. If you are exporting video to be used in another editing system or to be imported into a compositing application, you'll want to export at the maximum quality. Use a lossless codec or the codec supported by your video capture card, and specify the data rate that the editing system supports for video capture and editing.

CD-ROM playback The data rate for video played from a CD-ROM depends on the speed of the drive. For example, if you are preparing a final video file for a quad-speed CD-ROM drive (600 kilobytes per second), you might specify between 300 and 500 kilobytes per second to account for both the data rate of the drive and for the system overhead required to move the data.

Intranet playback The data rate can be 1 megabit per second or faster, depending on the speed of your intranet. Because they are limited in scope, intranets generally use higher quality communications lines than standard telephone lines, so they are usually much faster than the Internet.

Streaming video over the web The data rate should account for real-world performance at the target data rate. For example, the data rate for streaming video designed for a 56-kilobit-per-second connection is often set to 40 kilobits per second. That's because factors such as data volume and line quality often prevent telephone-based Internet connections from consistently achieving their stated data rate. For broadband connections, set the data rate for streaming video to 128 kilobits per second.

Downloading a video file over the web The data rate is less important than the size of the video file on disk, because the main concern is how long it takes to download the file. However, it still may be desirable to reduce the data rate for downloaded video because doing so reduces the size of the video file, making it download faster.

If you use Adobe Premiere Pro, use the Get Properties For command to analyze the data rate of files you export.

Exporting to videotape or DVD

Exporting to videotape

You can record your edited sequence onto videotape directly from your computer. The format and quality of the video depends on the Editing Mode you specified in the Project Settings dialog box.

To record to a precise point on a tape, make sure to enable the Adobe Premiere Pro device control feature. Alternatively, you can use compatible third-party device control that enables Adobe Premiere Pro to operate recording devices not supported by the built-in settings. If you don't have a device that Adobe Premiere Pro can control, you can still play the sequence and record the playback output manually. (See "About device control" on page 68.)

When you record a DV sequence to DV tape, all you need is an IEEE 1394 connection to a DV device. However, if you plan to record DV audio and video to an analog format, you'll need a device that is capable of converting DV audio and video to analog using the connectors supported by your analog video recorder. Most DV cameras and all DV video tape recorders are capable of this conversion; some DV cameras require that you record the video to DV tape, and then dub the DV tape to the analog video recorder.

Many video capture cards include compatible plug-in software that provides a menu command for recording to videotape. If the options you see are different than those described here, refer to your capture card or plug-in documentation for the most efficient way to export to tape.

Using the standard Export command, you can burn a sequence to a connected DVD burner. This method creates a basic DVD that plays automatically upon being inserted into a DVD player. You can also create a DVD-compliant file. To create a full-featured DVD that includes custom navigational menus, use the DVD Layout feature. See "Creating DVDs" on page 403.

Note: Before you export a sequence, make sure that all the clips it contains are online.

To prepare for recording to DV tape

Before you begin, make sure the DV device (camcorder or deck) is connected to your computer using an IEEE 1394 connection. IEEE 1394 connections can use 4-pin or 6-pin connectors, depending on the device.

1 Turn the DV camcorder on, and set it to VTR (VCR) mode.

2 Start Adobe Premiere Pro, and open the project.

3 Choose Project > Project Settings > General. Click Playback Settings.

Note: When you create a DV project, the editing mode is automatically and permanently set to DV Playback, which provides additional playback settings.

4 In the Export area of the Playback Settings dialog box, specify the appropriate format in the External Device menu. When the editing mode is set to a DV preset, the options include one of the following:

DV 29.97i (720 x 480) Specifies NTSC DV, which uses a timebase of 29.97 fps and interlaced fields.

DV 25i (720 x 576) Specifies PAL DV, which uses a timebase of 25 fps and interlaced fields.

DV 23.976i Specifies DV 24P (24 progressive) or 24PA (24 progressive advanced), which uses a timebase of 23.976 and interlaced fields (that become progressively scanned frames using a pulldown scheme).

5 Click OK to close the Project Settings dialog box.

To give your recording deck additional time before your video sequence starts and after it ends, add black before and after the sequence in the Timeline window. If you plan to have a postproduction facility duplicate your videotapes, add a minimum of 30 seconds of color bars and tone at the beginning of the program to aid in video and audio calibration. (See "To create color bars and a 1-kHz tone" on page 147.)

To record a sequence on videotape with device control

Before you export to videotape using device control, make sure that both the computer and the camera or deck are set up properly, as you would when capturing video with device control (see "About device control" on page 68).

If you're using equipment that comes with its own software plug-in for use with Adobe Premiere Pro, it may provide device control options different than those described here, and in different locations. (For information, see the documentation for the device.)

1 Make sure that your video recording device is on and that the correct tape is in the device. If necessary, locate and note the timecode for the location at which you want to begin recording. (This requires a tape recorded with timecode. See "To stripe a tape with timecode" on page 84.)

2 Activate the sequence you want to export, and choose File > Export > Export To Tape.

3 To let Adobe Premiere Pro control your deck, select Activate Recording Device and do any of the following:

• To specify a particular frame on the tape to start recording, select Assemble At Timecode and type the In point. If you don't select this option, recording begins at the current tape location

• To synchronize a device's timecode with the recording start time, select Delay Movie Start and type the numbers of quarter-frames that you want to delay the movie. Some devices need a delay between the time they receive the record command and the time the movie starts playing from the computer.

• To have Adobe Premiere Pro roll the tape before the specified start time so that the deck can attain a constant speed, select Preroll and type the number of frames you want the tape to play before recording begins. For many decks, 150 frames (5 seconds) is sufficient.

4 In the Options section, select any of the following options:

Abort After Dropped Frames Ends export automatically if a specified number of frames is not exported successfully. Specify the number in the box.

Report Dropped Frames Generates a text report alerting you to dropped frames.

Render Audio Before Export Prevents sequences containing complex audio from causing dropped frames during export.

5 Click Record. If you don't need to perform any more recordings after the Recording Successful message appears in the Status option, click Cancel to close the Export To Tape dialog box.

Note: If you want to use device control but it's unavailable, click Cancel. Choose Edit > Preferences, click Device Control, make sure that your device is set up properly in the Device Control options, and click OK. Then try recording to tape again.

To record a sequence on videotape without device control

You can export to videotape without device control by operating the playback controls in Adobe Premiere Pro and the recording controls on the device manually.

1 Activate the sequence you want to export.

2 Make sure that the sequence plays back on your deck or camera. If it does not, review the steps for preparing a DV program for videotape recording, or see the documentation for your analog device.

3 Make sure that the video recording device is on and that the tape is cued to the point where you want to start recording.

4 Position the current-time indicator at the beginning of the sequence (or work area, as needed).

5 Press the Record button on the device.

6 Press the Play button in the Program Monitor.

7 When the program finishes, press the Stop button in the Program Monitor, and then stop the tape on the device.

Exporting to files

Exporting video as a file

An edited sequence consists of clips that refer to corresponding media files on a hard disk. Whereas exporting a sequence to tape or DVD continues to rely on those source files, exporting a movie, still, or audio file creates a new, independent file. You can also export a source clip. For example, you may want to use a frame as a still image in a sequence, or recompress a video clip to another format.

Exporting a file takes time to render and output in the format you choose. Rendering time depends on the processing speed of your system, the nature of the source media, and on the processing demands of the settings you choose.

Adobe Premiere Pro provides two ways to export a file. You can use one of the standard Export commands or you can use the Adobe Media Encoder:

Standard Export Use the Export Movie command to create a movie file in standard formats, such as those included in Microsoft DV AVI or QuickTime. The Export Movie command also allows you to export other file formats, such as a sequence of TIFFs or Animated GIF. Use the Export Still and Export Audio commands to create a still image or audio file, respectively.

Adobe Media Encoder Use the Adobe Media Encoder to create files in formats such as MPEG-1, MPEG-2, or a web-friendly format using QuickTime, RealMedia, or Windows Media. The Adobe Media Encoder accommodates the numerous settings these formats offer, and also includes preset settings designed to export files compatible with particular delivery media, such as DVD, CD-ROM, and the Internet.

See also

"File formats supported for export" on page 381

To export a movie file

1 Do either of the following:

- To export a sequence, select the sequence in the Timeline panel or Program Monitor.

- To export a clip, select the clip in the Source Monitor or Project panel.

2 To specify a range of frames to export, do either of the following:

- In a sequence, set the work area.

- In a clip, set an In point and Out point.

3 Choose File > Export > Movie.

4 Click Settings, and choose settings as necessary.

5 Click OK to close the Settings dialog box.

6 Specify a location and file name, and click OK. If you want to cancel exporting, press Esc. Note that it may take several seconds to complete the cancellation.

Use the Save and Load buttons in the Export Movie Settings dialog box to save and later quickly load export settings that you use frequently. Loading saved settings is particularly useful when you create several types of video files (for example, NTSC and web video) from the same project.

See also

"Export settings" on page 381

To export marker data in AVI files

In Adobe Premiere Pro, you can export marker data. Exporting marker data is useful if you plan to author a DVD in Adobe Encore DVD. If you export marker data and specify a marker as a chapter point in Adobe Premiere Pro, Encore DVD recognizes the chapter point so that you can easily create links to it as you author your DVD. You can also export comments that you add to markers.

1 Choose File > Export > Movie.

2 In the Export Movie dialog box, click Settings.

3 For File Type, choose an AVI format (Uncompressed Microsoft AVI, Microsoft AVI, or Microsoft DV AVI) and then click Compile Settings.

4 Select options to specify the data you want to export. Select Export Blank Markers to include markers that don't have information in the fields. (This is useful if you want to preserve the marker only.)

5 Click OK to close the Compile Settings dialog box and then specify the other options you want in the Export Movie Settings dialog box.

To export a GIF or animated GIF

Animated GIF is best suited for solid-color motion graphics at a small frame size, such as an animated company logo. It works better for synthetic graphics than for live-action video. It is convenient because it is viewable in most web browsers without requiring a plug-in, but you cannot include audio in an animated GIF file. Export animated GIF the same way you do any other file, making sure that you choose Animated GIF as the File Type), except that you can specify special options by clicking Compile Settings in the Export Movie dialog box.

Note: For best results, test completed Animated GIF files in a web browser before distributing.

1 Choose File > Export > Movie.

2 In the Export Movie dialog box, click Settings.

3 For File Type, choose GIF or Animated GIF, and then click Compile Settings.

4 Specify the following options, if available:

Dithering Select to simulate colors that are not available in the web-safe color palette used by web browsers. Dithering simulates unavailable colors using patterns that intersperse pixels from available colors. Dithered colors may look coarse and grainy, but dithering generally improves the apparent color range and the appearance of gradations. Deselect this option to move unavailable colors to the next closest color in the palette; this may cause abrupt color transitions.

Transparency Select None from the menu to create the movie in an opaque rectangle. Select Hard to convert one color into a transparent area; click Color to specify the color. Select Soft to convert one color into a transparent area and soften the edges; click Color to specify the color.

Looping Select if you want the animated GIF to play continuously without stopping. Deselect this option if you want the animated GIF to play only once and then stop. This option is not available for a GIF sequence.

5 Click OK to close the Compile Settings dialog box and then specify the other options you want in the Export Movie Settings dialog box.

Exporting still-image sequences

Movies are the type of output most useful for easy previewing. However, a sequence of still images from a composition can be used for movie-making and desktop presentations. You can use a sequence of stills in the following ways:

• Transfer frames to film using a film recorder.

• Create still images for high-end video systems.

• Create still images and use them in a presentation.

• Select images for publishing or creating storyboards.

• Export source images for a graphics program in which the images can be edited or retouched and imported back into Premiere Pro as footage items.

To export a series of still images

You can export a clip or sequence as a sequence of still images, with each frame as a separate still image file. This can be useful to move a clip to animation and three dimensional applications that do not import video file formats, or for use in animation programs that require a still image sequence. When you export a still-image sequence, Adobe Premiere Pro numbers the files automatically.

1 Choose File > Export > Movie.

2 Click Settings.

3 For File Type, choose a still-image sequence format (Windows Bitmap, GIF, Targa, or TIFF). If you choose a movie format or Animated GIF, all the frames will be in one file.

4 Choose the frames to export from the Range menu.

5 Click Video, and specify options.

6 Click Keyframe And Rendering, specify options, and then click OK.

7 Specify a location to which you want to export all of the still-image files. It's usually best to specify an empty folder so that the sequence files don't become mixed with other files.

8 To set the sequence numbering, type a numbered file name. To specify the number of digits in the file name, determine how many digits are required to number the frames, and then add any additional zeroes you want. For example, if you want to export 20 frames and you want the file name to have five digits, type Car000 for the first file name (the remaining files are automatically named Car00001, Car00002,...Car00020).

9 Click OK to export the still-image sequence.

To export a still image

You can export any frame as a still image file.

1 Choose File > Export > Frame.

2 Click Settings.

3 Choose a format for File Type. Click Compile Settings for the file type you chose (if available), specify options, and click OK. For the Compile Settings available for Compuserve GIF, see "To export a GIF or animated GIF" on page 379.

4 Click Video, and specify options.

5 Click OK to close the Export Still Frame Settings dialog box.

6 Specify a location and file name, and then click OK.

When you export still images from DV for use in square-pixel graphics or video, you can prevent distortion by setting the Pixel Aspect Ratio to Square Pixels (1.0) and setting the Frame Size from 720 x 480 to 640 x 480 pixels.

To export audio as a file

You can export the audio portion of any sequence, without the video, into an audio file. When you export audio, the Video option is automatically deselected and unavailable.

1 Do either of the following:

• To export a sequence, select the sequence in the Timeline panel or Program Monitor.

• To export a clip, select the clip in the Source Monitor or Project panel.

2 To specify a range of frames to export, do either of the following:

• In a sequence, set the work area.

• In a clip, set an In point and Out point.

3 Choose File > Export > Audio.

4 Click Settings, and choose settings as necessary (see "Audio export settings" on page 385).

5 Click OK to close the Settings dialog box.

6 Specify a location and file name, and click OK. If you want to cancel exporting, press Esc. Note that it may take several seconds to complete the cancellation.

Note: You can also export audio by using the Export > Adobe Media Encoder and deselecting the Video option.

See also

"File formats supported for export" on page 381

Export settings

When you choose File > Export > Movie, Frame, or Audio, you can specify the settings that determine file type, compressor, and so on. Clicking the Settings button opens a dialog box that corresponds to the export type: Export Movie Settings, Export Frame Settings, Export Audio Settings. These are variants of the same dialog box, with the options limited according to the export type. Initially, the settings match the Project Settings you set when you started the project. However, you may need to change the settings according to your output goals. Consult the appropriate reference sections for more guidance in choosing export settings.

Note: Although the Project Settings dialog box and the Export Movie / Frame / Audio Settings dialog boxes appear similar, they have different options, and govern different settings.

Note: Some capture-card and plug-in software applications provide their own dialog boxes with specific options. If the options you see are different than those described in this section, refer to the documentation for your capture card or plug-in.

File formats supported for export

Adobe Premiere Pro can export files in any of the following formats. Additional file formats may be available in Adobe Premiere Pro if provided with your video-capture card or if you have added plug-in software.

Video formats

• Advanced Authoring Format (AAF)

- Macromedia Flash Video (FLV)

- Microsoft AVI and DV AVI

- Animated GIF

- MPEG-1 (and MPEG-1-VCD)

- MPEG-2 (and MPEG-2-DVD)

- RealMedia

- QuickTime

- Windows Media

Audio-only formats
- Microsoft AVI and DV AVI

- MPG

- PCM

- Dolby© Digital/AC3

- WMA

- RealMedia

- QuickTime

- Windows Audio Waveform (WAV)

Still-image formats
- Targa (TGF/TGA)

- TIFF

- Windows Bitmap (BMP)

Sequence formats
- GIF sequence

- Targa sequence

- TIFF sequence

- Windows Bitmap sequence

See also
"Supported file formats for import" on page 67

General export settings
The following options are available in the General panel of the Export Movie Settings, Export Frame Settings, and Export Audio Settings dialog boxes:

File Type Choose the kind of file you want to export from the menu. The file type you select affects which other export movie settings options are available.

Compile Settings Select to access format-specific options. AVI formats and GIF formats include compile settings. See "To export a GIF or animated GIF" on page 379 and "To export marker data in AVI files" on page 379.

Range Choose whether to export an entire sequence or clip, or a range of frames based on the work area of a sequence, or from the In point to the Out point of a clip.

Export Video Select to export the video tracks, or deselect to prevent exporting video tracks.

Export Audio Select to export the audio tracks, or deselect to prevent exporting audio tracks.

Add to Project When Finished Select to add the exported file to the Project panel after exporting is complete.

Beep When Finished Select if you want Adobe Premiere Pro to sound an alert when exporting is complete.

Embedding Options Choose whether to include a project link in the exported file. When a file contains project link information, you can open and edit the original project from within another Adobe Premiere Pro project or from another application that supports the Edit Original command. Select Project from this menu to embed the link information in the exported file; choose None if you do not want to include the information. This option is not available for all formats, or when exporting a source clip. (See "To edit a clip in its original application" on page 155.)

Video export settings

The following options are available in the Video panel of the Export Movie Settings dialog box and the Export Frame Settings dialog box:

Compressor Choose the codec (compressor/decompressor) for Adobe Premiere Pro to apply when exporting a file, and click Configure (if available) to set options specific to the selected codec. The codecs available depend on the File Type you chose in the General panel of the Export Movie Settings dialog box or Export Frame Settings dialog box.

Note: If you cannot find options that your hardware-based codec provides, see the documentation provided by the hardware manufacturer. Some codecs included with video-capture hardware require that you set compression options in dialog boxes provided by the codec, instead of through the options described in this section.

Color Depth Choose the *color depth*, or the number of colors to include in video that you export. This menu is not available if the selected Compressor supports only one color depth. Some codecs allow you to specify an 8-bit (256-color) palette when preparing a video program for 8-bit color playback—for example, to match the colors on a web page or in a presentation. When available, click Palette and then either select Make Palette From Movie to derive a color palette from the frames used in the video program, or select Load Palette Now to import a color palette that you prepared and saved previously. You can load color palettes in the ACO (Photoshop color swatch), ACT (Photoshop color palette), or PAL (Windows palette—Windows only) format.

Note: With the QuickTime file type, you can attach a 256-color palette to a movie of any bit depth. You can specify a palette for 24-bit movies to use when displaying on 8-bit monitors, and you can prevent palette "flashing" by attaching the same palette to many movies. Video for Windows supports attaching a palette only to an 8-bit movie.

Frame Size Specify the dimensions, in pixels, for video frames you export. Select 4:3 Aspect to constrain the frame size to the 4:3 aspect ratio used by conventional television. Some codecs support specific frame sizes. Increasing the frame size displays more detail but uses more disk space and requires more processing during playback.

Frame Rate Choose the number of frames per second for video you export. Some codecs support a specific set of frame rates. Increasing the frame rate may produce smoother motion (depending on the original frame rates of the source clips) but uses more disk space.

Pixel Aspect Ratio Choose a pixel aspect ratio that matches the output type. When the pixel aspect ratio (displayed in parentheses) doesn't match 1.0, the output type uses rectangular pixels. Because computers generally display pixels as squares, content using nonsquare pixel aspect ratios appear stretched when viewed on a computer but appear with the correct proportions when viewed on a video monitor. (See "Common pixel aspect ratios for assets" on page 34.)

Quality If available, drag the slider or type a value to affect the exported video's picture quality and, consequently, its file size. If you are using the same codec to capture and export, and you've rendered previews of a sequence, you can save rendering time by matching the export quality setting with your original capture quality setting. Increasing quality above the original capture quality does not increase quality, but may result in longer rendering times.

Limit Data Rate to _ K/Sec Select (if available for the selected compressor) and type a data rate to place an upper limit on the amount of video data produced by the exported video when it is played back.

Note: In some codecs, quality and data rate are interrelated, so that adjusting one option automatically alters the other.

Recompress Select to ensure that Adobe Premiere Pro exports a video file that is under the data rate you specified. Choose Always from the Recompress menu to compress every frame, even if it is already within the data rate, or choose Maintain Data Rate to preserve quality by compressing only the frames that are above the specified data rate. Recompressing previously compressed frames may lower picture quality. Deselect Recompress to prevent current compression settings from being applied to clips that were not altered when you edited them into the program.

Keyframe And Rendering export settings

The following options are available in the Keyframe And Rendering panel of the Export Movie Settings dialog box and the Export Frame Settings dialog box:

Fields Choose an option if required for your final medium. No Fields (the default) is the equivalent of progressive scan, which is the correct setting for computer display and motion-picture film. Choose Upper Field First or Lower Field First when exporting video for an interlaced medium, such as NTSC, PAL, or SECAM. The option you choose depends on the specific video hardware you use.

Deinterlace Video Footage Select this option if the video content in the sequence is interlaced and you are exporting to a noninterlaced medium, such as motion-picture film or progressive scan video. Deinterlacing can also make it easier to apply high-quality effects in another program, such as Adobe After Effects. If the sequence content does not have fields, don't select this option; instead select No Fields from the Fields option.

Optimize Stills Select this option to use still images efficiently in exported video files. For example, if a still image has a duration of 2 seconds in a project set to 30 fps, Adobe Premiere Pro creates one 2-second frame instead of 60 frames at 1/30 of a second each. Selecting this option can save disk space if you used still images. Deselect this option only if the exported video file exhibits playback problems when displaying the still images.

Keyframe Every _ Frames Select and type the number of frames after which the codec will create a keyframe when exporting video.

Add Keyframes at Markers Select this option to create keyframes only where markers exist in the Timeline window. For this to work, markers must exist in the Timeline window (see "To add an unnumbered sequence marker" on page 140 and "To add a numbered marker" on page 141).

Add Keyframes at Edits Select this option to create a keyframe at edit points in the Timeline window.

Note: Some codecs do not provide control over keyframes. In such codecs, the above options will not be available.

See also

Audio export settings

The following options are available in the Audio panel of the Export Movie Settings dialog box and the Export Audio Settings dialog box:

Compressor Specify the codec for Adobe Premiere Pro to apply when compressing audio. The codecs available depend on the File Type you specified in the General panel in the Export Movie Settings or Export Audio Settings dialog box. Some file types and capture cards support only uncompressed audio, which has the highest quality, but uses more disk space. Check with your capture card's documentation before choosing an audio codec.

Advanced Settings Click to access codec-specific options. This option is not available for all codecs. Consult the codec's documentation or its developer's website for more guidance on choosing advanced settings.

Sample Rate Choose a higher rate to increase the frequency at which audio is converted into a discrete digital value, or *sampled*. Higher sample rates increase audio quality and file size; lower sample rates decrease quality and file size. However, setting the sample rate higher than the audio's sample rate at the time of recording will not increase quality. Setting a different rate than the source files' audio, or *resampling*, requires additional processing time. You can avoid resampling by capturing audio at the same rate at which you want to export it.

Sample Type Choose a higher bit depth to increase accuracy of audio samples, which can improve dynamic range and reduce distortion, especially if the audio undergoes additional processing, such as filtering or resampling. Higher bit depths also increase processing time and file size; lower bit rates reduce processing time and file size. However, setting the bit depth higher than the audio's bit depth at the time of recording will not increase quality.

Channels Specify how many audio channels are in the exported file (see "About channels in audio clips" on page 174). If you choose fewer channels than are in the sequence's master track, the audio will be downmixed (see "About audio tracks in a sequence" on page 173).

Interleave Specify how often audio information is inserted among the video frames in the exported file. See your capture-card documentation for the recommended setting. A value of 1 frame means that when a frame is played back, the audio for the duration of that frame is loaded into RAM so that it can play until the next frame appears. If the audio breaks up when playing, the interleave value may be causing the computer to process audio more frequently than it can handle. Increasing the value lets Adobe Premiere Pro store longer audio segments that need to be processed less often, but higher interleave values require more RAM. Most current hard disks operate best with a 1/2- to 1-second interleave value.

Adobe Media Encoder

About the Adobe Media Encoder

The Adobe Media Encoder is an encoding mechanism employed by programs such as Adobe Premiere Pro, Adobe After Effects, and Adobe Encore DVD for output to certain media formats. Depending on the program, the Adobe Media Encoder provides a specialized Export Settings dialog box that accommodates the numerous settings associated with certain export formats, such as MPEG-1, MPEG-2, and those designed for delivering content over the web. For each format, the Export Settings dialog box includes a number of presets that are tailored for particular delivery media. You can also save custom presets that you can share with others or reload as needed.

Although the Export Settings dialog box's appearance varies slightly and it is accessed differently in each program, its general form and function are consistent. The Export Settings dialog box always contains an area for specifying general export settings (such as the Format, Range, Preset, and tracks to export) and an area with tabbed panels. The types of tabbed panels available depend on the format and preset you specify. A panel menu also contains commands specific to the selected format.

When exporting a movie file for delivery media other than full-screen, full frame-rate television, it is often necessary to deinterlace the frames, crop the image, or apply certain filters. Through the Export Settings dialog box, the Adobe Media Encoder offers these tasks as pre-rendering options, because it's best to perform them prior to encoding the file. You can also specify post-encoding tasks, which include generating a log file or uploading the exported file to a specified server automatically.

Exporting using Adobe Media Encoder

In Adobe Premiere Pro, the Export Settings dialog box includes a large image area that you can toggle between two panels. The Source panel allows you to see the source video and apply cropping options interactively. The Output panel includes a deinterlacing feature, and indicates how the clip's frame size and pixel aspect ratio (PAR) appear after processing. A time display and a time ruler that includes a current-time indicator (CTI) and viewing area bar appear under each view's image. These controls work identically to those located in the Source Monitor and Program Monitor. Other panels include various encoding settings, depending on the selected format.
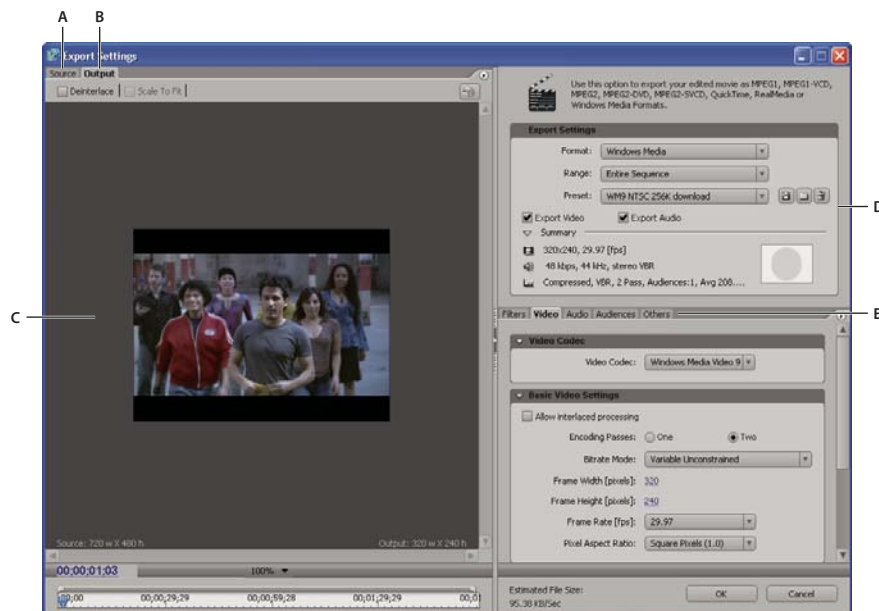
Export Settings dialog box
A. Source panel B. Output panel C. Image Area D. Export Settings E. Video, Audio, and Audiences settings panels

See also

"Exporting video as a file" on page 378

To toggle between the Source and Output views

1 Select the sequence or clip you want to export, and choose File > Export > Adobe Media Encoder.

2 In the Export Settings dialog box, do one of the following:

• To view the image after processing, click the Output tab.

• To toggle between the views, click the Switch To Source/Switch To Output button ⟲ .

To set the image preview pixel aspect ratio

1 Select the sequence or clip you want to export, and choose Export > Adobe Media Encoder.

2 In the Source or Output panel menu, choose either of the following options:

Aspect Corrected Preview Displays the image, correcting for differences between the source file's native pixel aspect ratio (PAR) and your computer screen.

1:1 Pixel Preview Displays the image using a square PAR. If the source file's native PAR uses non-square pixels, the image may appear distorted on a computer screen.

See also

"Common pixel aspect ratios for assets" on page 34

To use the Export Settings dialog box viewing area controls

• To scale the video image, choose a scale setting in the View Zoom Level menu. Choosing Fit scales the image to fit into the available image area in the panel. The zoom level doesn't affect the source file or exported file, only the image in the dialog box.

• To cue the video numerically, drag the timecode display, or click the timecode display and enter a valid number.

• To cue the video using time ruler controls, click or drag in the time ruler under the image to set the current-time indicator (CTI).

• To change the visible portion of the time ruler, drag the viewing area bar located above the time ruler. Dragging the ends of the viewing area bar closer together shows the ruler in more detail; dragging them farther apart reveals more of the time ruler. Drag the center of the viewing area bar to change the visible portion of the time ruler.

To export a file using Adobe Media Encoder

1 Do either of the following:

• To export a sequence, select the sequence in the Timeline panel or Program Monitor.

• To export a clip, select the clip in the Source Monitor or Project panel.

2 To specify a range of frames to export, do either of the following:

• In a sequence, set the work area.

• In a clip, set an In point and Out point.

3 Choose File > Export > Adobe Media Encoder.

4 In the Adobe Media Encoder Export Settings area, specify the following options:

Format Specify the type of media file you want to export. Formats include types of MPEG-1, MPEG-2, Macromedia Flash Video, QuickTime, RealMedia, and Windows Media formats. To export other file formats, use the File > Export > Movie, Frame, or Audio command. (See "Exporting video as a file" on page 378.)

Range Choose whether to export an entire sequence or clip, or a range of frames you specify: the work area of a sequence, or from the In point to the Out point of a clip.

Preset Choose the option that most closely describes your export goal. You can customize the settings and save them as a new preset.

Export Video Select to include video in the exported file; deselect to exclude video from the exported file.

Export Audio Select to include audio in the exported file; deselect to exclude audio from the exported file.

5 To customize the preset options, click an available tab (Video, Audio, and so on) and specify the appropriate options.

6 To crop the image, specify cropping options in the Source panel. To deinterlace the image, select Deinterlace in the Output panel.

7 To specify XMP data, choose XMP Info in the tabbed panel menu and then enter information in the dialog box.

Note: The XMP Info option is available when exporting MPEG-1, MPEG-2, or QuickTime formats.

8 Click OK to begin encoding.

Custom presets

When exporting with the Adobe Media Encoder, choosing a format automatically makes available a list of associated presets designed for particular delivery scenarios. Selecting a preset, in turn, activates the appropriate options in the various settings panels (Video, Audio, and so on). In most cases, one of the provided presets will match your output goals. However, you can adjust an existing preset's parameters and save your custom settings as a new preset that you can share with others and reload whenever needed.

Note: Adobe Technical Support supports only Media Encoder presets that are included with Adobe Premiere Pro.

To create and save a custom preset
1 In the Adobe Media Encoder Export Settings panel, choose a Format and a Range.

2 For Preset, choose the preset that most closely matches the settings you want.

3 To exclude video or audio from the exported file, deselect the appropriate option in the Export Settings panel.

4 Do any of the following:

• To customize video settings, specify the options you want in the Video panel (see "Adobe Media Encoder Video options" on page 390).

• To customize audio settings, specify the options you want in the Audio panel (see "Adobe Media Encoder Audio options" on page 392).

• To customize alternates, audiences, or multiplexer settings, specify the options you want in the appropriate panel (see "Adobe Media Encoder Alternates and Audiences options" on page 393, and "MPEG multiplexer preset options" on page 391).

5 To customize metadata, choose XMP Info in the tabbed panel menu and then enter information in the dialog box (see "About XMP metadata" on page 395).

6 To crop the source video, use controls in the Source panel; to deinterlace the video, select the option in the Output panel (see "Pre-Render options" on page 395).

Note: Altering any setting changes the preset name to "Custom," until you save the settings as a new preset.

7 When you're finished customizing a preset, click the Save button 💾.

8 Type a name for the preset.

9 Do any of the following, and then click OK:

• To include filters you specified in the Filters panel in the preset, select Save Filters.

• To include options you specified in the Others panel (such as FTP settings), select Save "Others" Options.

To import a preset
1 In the Adobe Media Encoder, choose the format and preset you want to import.

2 Click the Import Preset button 📁 .

3 Navigate to the location of the preset, select it, and then click Open.

4 Type a name for the imported preset and specify other options and then click OK.

To export a preset

1 In the Adobe Media Encoder, choose the format and preset you want to export.

2 Alt-click the Save Preset button 💾.

3 Choose the location to save the preset, name it, and then click Save. Adobe Premiere Pro saves the preset as a .vpr file.

To delete custom presets

1 In the Adobe Media Encoder, choose the format and preset you want to delete.

2 Do either of the following:

• To delete a single preset, click the Delete Preset button 🗑 .

• To delete all custom presets, Ctrl+Alt-click the Delete Preset button.

3 Click OK to confirm the deletion.

Adobe Media Encoder format options

When you export using the Adobe Media Encoder, you choose a format in the Export Settings dialog box that determines which other options are available in the Export Settings dialog box. Select the format best suited for your output goal. In Adobe Premiere Pro, format options include:

MPEG1 One of a set of standards defined by the Motion Picture Experts Group (MPEG) designed to deliver video and associated audio at bitrates around 1.5 MBps. Generally, MPEG1 movies are suitable for delivery formats such as CD-ROM and as progressively downloadable files on the web.

MPEG1-VCD A variant of the MPEG-1 standard designed for Video Compact Disk (VCD). VCD is a cheaper, more accessible but lower quality alternative to DVD. VCDs use standard recordable CD media, and can be played in a standard CD-ROM drive. The format provides an image quality comparable to VHS video.

MPEG2 One of a set of standards defined by the Motion Picture Experts Group (MPEG) for delivering video and associated audio at bitrates up to around 15 MBps. MPEG 2 can deliver high-quality, full-screen, full-motion video.

MPEG2-DVD A subset of the MPEG-2 standard designed for encoding onto Digital Video Disk (DVD) media. DVDs are a widespread distribution format and can be played on computer DVD drives, or on set-top DVD players. An MPEG2-DVD file can be encoded directly onto DVD to create a movie that plays automatically (known as an autoplay DVD), or it can be used in an authoring program (such as Adobe Encore DVD) to create a DVD with navigational menus and other features.

MPEG2-SVCD A variant of the MPEG-2 standard designed for the Super Video Compact Disk (SVCD) format.

Macromedia Flash Video (FLV) The Macromedia format for streaming audio and video over the web and other networks.

QuickTime Apple Computer's multimedia architecture that includes a number of codecs. The Adobe Media Encoder Export Settings dialog box is particularly useful for setting options for QuickTime streaming media codecs.

Real Media Real Network's multimedia format for streaming video and audio over the web or other networks. Streaming media delivers video over the web or other network without downloading a file, comparable to the way a traditional broadcast works.

Windows Media One of Microsoft's multimedia architectures that includes a number of codecs, particularly those for web delivery. The Adobe Media Encoder Export Settings dialog box is useful for setting options for Windows Media streaming media codecs.

Note: For more detailed information about each format, see the developer's website.

See also

"Understanding video file formats" on page 372

Adobe Media Encoder Filters options

Noise, grain, and similar artifacts can interfere with the efficient compression of images. For this reason, the size of the final output file may in some cases be reduced by applying a noise reduction filter to an image or movie before compression takes place.

In the Export Settings dialog box, you can specify whether to apply a noise reduction filter before compression, and you can also set the amount of noise filtering to apply.

If you intend to remove noise and grain from your project for reasons other than reduction of compressed file size, consider using the Noise & Grain effects in Adobe Premiere Pro or After Effects.

Adobe Media Encoder Video options

The options available in the Adobe Media Encoder Video tab depend on the format you specify in the Export Settings area. Video settings include some or all of the following options:

Codec Specifies the codec used to encode the video from those available on your system. The term *codec* is derived from *compressor/decompressor* and *coder/decoder*.

Quality Specifies the encoding quality. Generally, higher values increase rendering time and file size.

TV Standard Conforms the output to the NTSC or PAL standard.

Frame Width Scales the output frame's horizontal aspect to the specified width.

Frame Height Scales the output frame's vertical aspect to the specified height.

Frame Rate The output frame rate for either NTSC or PAL formats.

Field Order Specifies whether the output file's frames are interlaced, and if so, whether the upper or lower field is first in the scanning order. (See "About interlaced and noninterlaced video" on page 129.)

Pixel Aspect Ratio Specifies the ratio of each pixel's width to height, which determines the number of pixels required to achieve a given image aspect ratio. Some formats use square pixels, while others use nonsquare pixels.

Bitrate Encoding Specifies whether the codec achieves a constant or variable bitrate in the exported file:

• **Constant Bit Rate (CBR)** Compresses each frame in the source video to the fixed limit you specify, producing a file with a fixed data rate. Therefore, frames containing more complex data are compressed more, while less complex frames are compressed less.

• **Variable Bit Rate (VBR)** Allows the exported file's data rate to vary within a range you specify. Because a given amount of compression degrades the quality of a complex image more than it degrades the quality of a simple image, VBR encoding compresses complex frames less and compresses simple frames more.

In general, an image is complex and more difficult to compress efficiently if it contains great detail or if it differs significantly from previous frames, as it would in a scene containing motion.

Note: When comparing CBR and VBR files of the same content and file size, you can make the following generalizations: A CBR file may play back more reliably over a wider range of systems, because a fixed data rate is less demanding on a media player and computer processor. However, a VBR file tends to have a higher image quality, because VBR tailors the amount of compression to the image content.

Bitrate Specifies the number of megabits per second of playback for the encoded file. (This is available only if you select CBR as the Bitrate Encoding option.)

The following options appear only if you select VBR as the Bitrate Encoding option:

Encoding Passes Specifies the number of times the encoder will analyze the clip before encoding. Multiple passes increases the time it takes to encode the file, but generally results in more efficient compression and higher image quality. (Adobe After Effects does not support multiple encoding passes.)

Target Bitrate Specifies the number of megabits per second of playback for the encoded file.

Maximum Bitrate Specifies the maximum number of megabits per second of playback you want the encoder to allow.

Minimum Bitrate Specifies the minimum number of megabits per second of playback you want the encoder to allow. The minimum bitrate differs according to the format. For MPEG-2-DVD, the minimum bitrate must be at least 1.5 Mbps.

M frames Specifies the number of B frames (Bi-directional frames) between consecutive I frames (Intra-frames) and P frames (Predicted frames).

N frames Specifies the number of frames between I frames (Intra-frames). This value must be a multiple of the M frames value.

Closed GOP Every Specifies the frequency of each Closed Group of Pictures (Closed GOP), which cannot reference frames outside of the closed GOP. A GOP consists of a sequence of I, B, and P frames. (This option is available when you choose MPEG-1 or MPEG-2 as the format.)

Automatic GOP Placement When selected, sets the placement of Group of Pictures (GOP) automatically. (This option is available when you choose MPEG-1 as the format.)

Note: MPEG-1 and MPEG-2 formats include numerous advanced options not listed here. In most cases, selecting a format or preset designed for your target output sets the appropriate options automatically. For detailed information on options not listed, consult the specifications for the MPEG-1 (ISO/IEC 11172) and MPEG-2 (ISO/IEC 13818) formats.

MPEG multiplexer preset options

Multiplexer preset options control how After Effects and Adobe Premiere Pro merge MPEG video and audio data into a single stream. The exact options available depend on the MPEG format you choose.

When you choose the MPEG-2 format, all Multiplexer options provided by the MPEG standard are available for manual control. In most cases, it's better to select an MPEG format specifically targeted to your output medium (such as MPEG-2 DVD).

MPEG format	ISO/IEC standard
MPEG-4	ISO/IEC 14496
MPEG-2	ISO/IEC 13818
MPEG-1	ISO/IEC 11172

For more information on the options available, search the web for the ISO/IEC standards for the MPEG formats.

About MPEG

MPEG is the name of a family of file formats specified by the ISO/IEC Moving Picture Experts Group. MPEG formats include several compression methods. It requires significant processing power and time to generate these keyframe-based file formats from other video formats.

MPEG-1 Generally used for the Internet and CD-ROM, providing picture quality comparable with VHS quality at quarter-screen frame size.

MPEG-2 Delivers higher quality video than MPEG-1. A specific form of MPEG-2 was chosen as the standard for compressing video for DVD video. This is called *DVD-compliant MPEG-2.*

MPEG-4 Includes many of the features of MPEG-1 and MPEG-2, and adds support for interactivity. It offers better compression and reduces file size while maintaining the same perceptual quality level as MPEG-2. MPEG-4 part 10 is the HD DVD standard.

After Effects and Adobe Premiere Pro offer a number of MPEG presets to optimize the output quality for various project types. If you're experienced with MPEG encoding, you can further fine-tune projects for specific playback situations by customizing the presets in the Export Settings dialog box.

In After Effects, you can create MPEG-2 and MPEG-2 DVD video. In Adobe Premiere Pro, you can create various types of MPEG video by using the File > Export > Adobe Media Encoder command or export directly to DVD-compliant video by using the Export To DVD command (any video you export to DVD is automatically transcoded to MPEG-2 if it isn't already in that format).

After Effects and Adobe Premiere Pro add metadata to MPEG-2 files that Adobe Encore DVD can read for aid in authoring and building DVDs. This metadata contains information that enables Adobe Encore DVD to multiplex audio and video, automatically generate DVD chapter points, and generate Edit Original information. For more information, see Adobe Encore DVD Help.

Adobe Media Encoder Audio options

The options available in the Export Settings dialog box Audio tab depend on the format you specify in the Export Settings area. Some common audio options include the following:

Codec Specifies the codec used to encode the audio:

• **SurCode for Dolby Digital 5.1** A high-quality encoding format developed for multichannel digital sound and the most common encoder for DVD-video.

• **MainConcept MPEG Audio** A high-quality encoder developed by MainConcept media technologies, and included with Adobe Premiere Pro and Adobe After Effects.

• **PCM (pulse-code modulation) Audio** A lossless audio format sampled at 48 kHz. Files of this format tend to be larger than files of the other formats.

Audio Format Determines the audio type.

Bit Rate Specifies the output bitrate of the audio. Generally, higher bit rates increase both quality and file size. This option is available for Dolby˙ Digital, MainConcept MPEG, and some Windows Media audio codecs.

Note: Options not documented here are specific to the selected format. For detailed information, consult the specifications for the selected format.

Adobe Media Encoder Alternates and Audiences options

Specifying a streaming media codec in RealMedia or Windows Media formats enables Audiences options, while QuickTime streaming media codecs enable a similar set of Alternates options. Both allow you to output variations of a movie suited to different network speeds. The player software associated with the format detects and selects the most appropriate version to ensure smooth playback. For example, Windows Media includes Audiences such as Dial-up Modems (56 Kbps) and Broadband Or Cable Modem/DSL (384 Kbps). Whereas QuickTime generates individual movies suited for each export type, RealMedia and Windows Media generate a single movie that stores the variations.

Note: Some codec-specific settings are not documented here. For more detailed information regarding a particular codec, check the documentation provided by its developer.

To add Alternates or Audiences

1 In the Adobe Media Encoder Export Settings dialog box, specify a format that supports streaming media (QuickTime, RealMedia, or Windows Media) and choose a streaming option from the Preset menu.

2 Select the Filters, Video, Audio, and Others tabs and specify the options you want.

3 Do either of the following:

• For RealMedia or Windows Media output, select the Audiences pane and specify the options you want.

• For QuickTime output, select the Alternates pane and specify the options you want.

4 With any pane selected, choose Add/Remove Audiences (or Add/Remove Alternates) from the panel menu (click the arrow button in the upper right of the panel).

5 In the Select Audiences (or Select Alternates) dialog box, click Add.

6 In the System Audiences (or System Alternates) dialog box, check the options appropriate for your intended viewers, and click OK.

7 Click OK to close the Select Audiences (or Select Alternates) dialog box.

Note: You can't have more than ten alternates or audiences. If necessary, you can delete the ones you don't want, and add the ones you want.

To copy or delete an Alternate or Audience

1 In the Adobe Media Encoder Export Settings dialog box, specify a format that supports streaming media (QuickTime, RealMedia, or Windows Media) and choose a streaming option from the Preset menu.

2 Select the Filters, Video, Audio, and Others tabs and specify the options you want.

3 Do either of the following:

• For RealMedia or Windows Media output, select the Audiences pane and specify the options you want.

• For QuickTime output, select the Alternates pane and specify the options you want.

4 With any pane selected, choose Add/Remove Audiences (or Add/Remove Alternates) from the panel menu (click the arrow button in the upper right of the panel).

5 In the Select Audiences (or Select Alternates) dialog box, select the item you want to copy or delete, and click Duplicate or Remove.

6 If copying, click the name of the duplicate item, move the mouse slightly to highlight it, type a new name, and then press Enter.

7 When you are finished, click OK.

Note: Removing an item from the Alternates or Audiences list can't be undone.

To specify QuickTime Alternates options

1 In the Adobe Media Encoder Export Settings dialog box, specify a QuickTime for Format, and then choose a streaming option from the Preset menu.

2 In the Alternates panel, select any of the following options:

Loop Plays the movie in a continuous loop.

Compress Movie Header Reduces the file size of the file.

Autoplay Plays the movie automatically, without prompting the viewer.

3 To create a movie that will be delivered using QuickTime Streaming Server software, select For Streaming Server and then specify an option in the Hint Movie menu:

Not Self-Contained The file depends on the primary movie file, which must also be on the server, for some of the information required for playback.

Self-Contained And Optimized The file contains all the information necessary for playback and is optimized for the server. Optimizing allows the server to support a greater number of viewers, but increases the file size significantly.

Self-Contained The file contains all the information necessary for playback.

Note: A hinted movie contains all the information necessary to stream a video over a network.

4 To use alternates, check Alternate Movie, and specify the following options:

Alternate Filename prefix Specifies the root file name for alternates.

Create Reference File, Fallback Creates a reference file and one alternate file as a fallback.

Note: The reference movie contains a list of references to alternates, movies that use different data rates designed for different network speeds. A fallback file is a movie specified to play if the alternates don't match the viewer's configuration, or if they're using older software that doesn't recognize alternates.

Target Path Specifies the where the alternates are stored. You can enter the pathname, or click the Browse button to navigate to the location using a dialog box.

To specify RealMedia options

1 In the Adobe Media Encoder Export Settings dialog box, specify a RealMedia for Format, and then choose a streaming option from the Preset menu.

2 To allow the viewer to record the file, select Allow Recording.

3 Specify either of the following options:

One Pass Analyzes the video and encodes it in a single process.

Two Pass Analyzes the video to optimize compression, then encodes it. This method yields better quality than One Pass, but takes longer.

4 For Bitrate encoding, choose a constant or variable bitrate encoding method.

5 To specify a bitrate manually, use the slider or enter a value. The bitrate values available for adjusting depends on the type of bitrate encoding you specified in step 4.

To specify Windows Media Audiences options

1 In the Adobe Media Encoder Export Settings dialog box, specify a Windows Media for Format, and then choose a streaming option from the Preset menu.

2 In the Audiences panel, specify an option for Output:

Compressed Specifies that the codec you select in the Video tab is applied. This is the default setting, and most appropriate for most users.

Uncompressed Specifies that no compression is applied. Because this setting results in very large files, it is not appropriate for most users.

Adobe Media Encoder Others options

The Others pane of the Export Settings dialog box allows you to upload the exported file to an FTP (File Transfer Protocol) server that has storage space allocated for file sharing. FTP is a common method for transferring files over a network, and is especially useful for sharing relatively large files using an Internet connection. The server's administrator can provide you with the correct information to connect to the server successfully. The Others panel includes the following options:

Server Name Enter the DNS or IP address of the server on which the FTP site is located.

Port Specify the number assigned to the FTP server's command port, which is 21 by default.

Remote Directory Enter the location on the FTP server to access, expressed as a file path.

User Login Enter the user's identity, as designated by the server's administrator.

Password Enter the password to a password protected server.

Retries Specify the number of attempts to contact the server if a connection isn't established.

Send Local File To Recycle Bin Deletes the local copy of the exported file once it has been uploaded to the FTP server.

Test Verifies the connection with the FTP server.

Log File Details Specify whether to generate a log file, and select the information that the log file includes (errors, warnings, settings, and render frame time).

About XMP metadata

Metadata is descriptive file information that can be searched and processed by a computer. Adobe's eXtensible Metadata Platform (XMP) lets you include metadata with a file to provide information about the contents of the file. Applications that support XMP can read, edit, and share this information across databases, file formats, and platforms. Some Adobe programs, such as Adobe Bridge, can use or write XMP information.

You can specify XMP metadata to be included with a file you export using the Adobe Media Encoder when you specify an MPEG-1 or MPEG-2 format.

Pre-Render options

In general, it's best to apply certain processing options—such as deinterlacing and cropping—to an exported file prior to encoding it to a particular format. Doing so can avoid visual artifacts associated with performing the same tasks after encoding. The cropping options you specify in the Source panel and the deinterlacing option you specify in the Output panel of the Settings dialog box are applied prior to encoding, and are sometimes referred to as *pre-encoding options.*

Note: You can access the Noise Reduction filter option (also considered a pre-encoding task) by selecting the Filters tab.

To deinterlace the source prior to encoding

❖ In the Output panel of the Export Settings dialog box, select Deinterlace.

To crop the source prior to encoding

1 In the Export Settings dialog box, click the Source tab to activate the Source panel.

2 Select the Crop button and do any of the following:

• To crop the image interactively, drag the sides or corner handles of the crop box around the source image.

• To crop numerically, enter the values for Left, Top, Right, Bottom, in pixels.

• To constrain the proportion of the cropped image, choose an option from the Crop Proportions menu.

3 Click the Output tab to preview how the cropped image will appear.

4 To eliminate black areas resulting from cropping, select Scale to Fit.

Note: When you actually encode the video, make sure that you set the width and height values in the encoder to match these scale height and width settings. The minimum size to which you can crop an image is 40 pixels by 40 pixels.

Exporting for online editing and collaboration

Exporting an EDL

With Adobe Premiere Pro you can export your project as an edit decision list (EDL) in the CMX3600 format. This format is the most widely accepted and most robust of the EDL formats.

When you set up an Adobe Premiere Pro project from which you will export an EDL, you must satisfy the following criteria:

• EDLs work best with projects that contain no more than one video track, two stereo audio tracks, and no nested sequences. Most standard transitions, frame holds, and clip speed changes also work well in EDLs.

• Capture and log all the source material with the correct timecode.

• The capture card must have device control that uses timecode.

• Videotapes must each have a unique reel number and be formatted with timecode before you shoot video.

To export an Adobe Premiere Pro project as an EDL

1 Open or save the project that you want to export as an EDL.

2 Make sure that the Project window is active, and then choose File > Export > Export To EDL.

3 Specify the location and name for the EDL file, and click Save.

4 In the EDL Export dialog box, choose a sequence to export. Specify which video and audio tracks you want to export. You can export one video track and up to four audio channels.

5 Click OK.

About AAF export

Advanced Authoring Format (AAF) is a multimedia file format that allows you to exchange digital media and metadata between platforms, systems, and applications. Authoring applications that support AAF, such as the Avid Xpress family of editing products (generally referred to as "Avid Xpress"), read and write the data in AAF files to the extent that they support the format. AAF is a widely recognized file-exchange standard for video editing.

Adobe Premiere Pro includes an AAF export command that allows you to export to AAF project files that contain clip, sequence, and editing data.

To ensure that the project you want to export conforms to general AAF specifications and is compatible with an Avid Xpress product, consider each of the following:

• The AAF files exported by Adobe Premiere Pro are compatible with the Avid Xpress family of editing products (Avid Xpress DV, Avid Xpress Pro, and Avid Xpress Pro HD) and have not been tested with other AAF importers.

• Transitions should appear only between two clips, not adjacent to the beginning or end of a clip. Each clip must be at least the same length as the transition.

• If a clip has a transition at both its In and Out points, the clip should be at least the same length as both transitions combined.

• When naming clips and sequences in Adobe Premiere Pro, avoid using special characters, accented characters, or characters that affect the parsing of an XML file. Some characters to avoid include /, >, <, °, and ü.

• AAF files exported from Adobe Premiere Pro and imported into Avid Xpress do not automatically relink to the source footage. To relink the footage, use the Offline Only batch import option in Avid Xpress.

To export a file as AAF

1 Choose Project > Export Project As AAF.

2 If prompted to save your project, click Continue to save it and proceed with the export.

3 Specify a name and location for the saved file, and click Save.

About the AAF plug-in

The AAF Export plug-in converts Adobe Premiere Pro projects as follows:

Cuts-only mono/stereo audio and video The plug-in fully supports these elements of a project. The plug-in does not convert audio pan, gain, and level changes, and 5.1 audio. Stereo audio channels are separated into two tracks in the Avid Xpress sequence.

Clip speed The plug-in converts video clip speed changes (slow, fast, reverse playback) to Avid Xpress' Motion Effect, which is the only supported effect. Clip speed applied to nested sequences is also converted. Avid Xpress does not have an equivalent to Motion Effect for audio. If the speed change makes the audio clip longer than the source media, the plug-in stretches the audio clip to the same length as the rest of the source media, beginning at the StartTime, and places filler in the gap. You can fix these portions of the sequence manually in the Avid editing system.

Batch captured or redigitized files The plug-in retains the tape name specified in the AAF file. Use the Batch Record capability in Avid Xpress to recapture the media from tape.

Footage of varying dimensions The plug-in exports the project at its full resolution. However, importing scales all footage according to the resolution specified in the AVID project.

Nested sequences The plug-in builds the master composition from the nested sequences recursively (because Avid Xpress does not support linking to the nested sequences). Therefore, in the AAF file, there's no linking between the master composition and the nested sequences.

Titles The plug-in converts titles to offline media in Avid Xpress.

Bin hierarchy Avid Xpress places all items into a single bin. Projects with multiple bins convert into one bin.

Graphic files The plug-in saves a reference to all original files, but compatibility in Avid Xpress is limited to the formats that it supports. (See the Avid Xpress documentation for information on supported graphic file formats.)

Project elements The plug-in converts synthetic clips, such as Bars and Tone, Black Video, Color Matte, and Universal Counting Leader to offline media in XDV.

Sequence and clip markers The plug-in converts all sequence markers, except the sequence In and Out markers, to locators on the timecode (TC1) track in Avid Xpress. The Chapter, URL, and Frame Target fields are not converted because there are no equivalents in Avid Xpress. The plug-in converts clip markers to segment markers in Avid Xpress.

Note: The AAF Export plug-in ignores markers located beyond the end of the sequence.

Current-time indicator position In the exported file, the current-time indicator retains its original position if it is within the duration of the sequence. Otherwise, the plug-in places the current-time indicator at the end of the Avid Xpress sequence.

Grouped clips Upon import, all grouped clips are ungrouped and treated separately.

Transitions and effects Transitions and effects exported from Adobe Premiere Pro to the AAF format are identified uniquely in Avid Xpress. For a table of supported transitions and effects, see the Adobe website.

About Project Manager

The Adobe Premiere Pro Project Manager can help facilitate an efficient workflow by performing two functions: reducing the storage needs of a project, and consolidating the files associated with a project.

The Project Manager reduces a project by creating a new version of the project, called a *trimmed project*. In the trimmed project, file references have been modified so that the project refers only to the portions of the footage items that you used in sequences. You can instruct the Project Manager to copy the relevant portions of the source media files to serve as the trimmed project's source files; or you can have the trimmed project list the footage items as offline, so that you can capture them from videotape. (The latter method is useful when employing an offline/online editing workflow, in which you replace low-quality footage used for editing with high-quality footage used for export.) Using either method, you reduce storage requirements by using only the media you need to create and export the sequences in the project; you can archive or delete the original source media.

The Project Manager can also help you consolidate, or *collect*, a project. Collecting files copies the current project and all of its associated media files to a single location. You can use this feature to gather a project's source media files when they are stored in various locations, and to prepare a project for sharing or archiving.

When you create a trimmed project and source files, keep the following things in mind. The Project Manager copies only portions of source footage used in sequences. However, you can specify the number of extra frames, or *handles*, the new footage includes, so that you can still make minor edits in the trimmed project. The new footage retains the timecode and reel number of the original captured footage. If one or more subclips shares frames with another subclip, the Project Manager creates a footage file that contains only those shared frames. The Project Manager also copies the still image sequences used in the original project. Still images, titles, offline clips, and generated footage, such as color bars and counting leaders, are also retained, but not trimmed.

When either trimming or collecting a project, you can specify whether the new project retains any of the unused clips from the original project.

Note: Project Manager retains any effect keyframes and clip markers that exist beyond the In and Out points of a trimmed clip.

To trim or copy your project

💡 *You should consider using the "Include" options below when backing up or archiving your footage.*

1 Make sure that the Project Window is active, and choose Project > Project Manager.

2 In the Project Manager window, select one of the following:

Create New Trimmed Project to create a new version of the current project that refers only to the footage you used in sequences

Collect Files and Copy to New Location to copy and consolidate the footage you used in the project

3 Select any of the following options, if available.

Note: The options that are available depend on whether you selected to trim the project or to collect and copy the project files in step 2.

Exclude Unused Clips Specifies that Project Manager will not include, or copy, media you did not use in the original project.

Make Offline Specifies that Project Manager denote as "offline" any footage that you can recapture later. When you select this option, Project Manager retains reel names and timecode to facilitate quick batch capture. Selecting this option is especially useful if you used low resolution footage in your original project, or if you are archiving a project. This option is available only if Create New Trimmed Project is selected.

Note: When recapturing footage using offline clips from a trimmed project, source clips that do not match the current project settings are recaptured at their original settings, not the current project settings. To override this behavior, click Override Clip Settings in the Batch Capture dialog box and specify the settings that you want for all captured clips. However, this option is rarely necessary for capturing DV footage.

Include Handles Specifies the number of frames to retain before the In point and after the Out point of each trimmed clip. For example, a value of 30 means that 30 frames are retained before the In point, and 30 frames are retained after the Out point. Handles function as extra frames that allow for additional minor adjustments to the edits in the new project.

Include Preview Files Specifies that effects you rendered in the original project remain rendered in the new project. When not selected, the new project occupies less disk space, but the effects are not rendered. This option is available only if you select Collect Files And Copy To New Location.

Include Audio Conform Files Ensures that the audio you conformed in the original project remains conformed in the new project. When not selected, the new project occupies less disk space, but Adobe Premiere Pro conforms the audio again when you open the project. This option is available only if you select Collect Files And Copy To New Location.

Rename Media Files To Match Clip Names Renames the copied footage files with the same names as your captured clips. Select this option if you rename your captured clips from within the Project window and want the copied footage files to have the same name. (Captured files that you import, especially those captured using scene detection, may not have intuitive names, so you may want to rename them from within the Project window.) This option

ensures that the file name of the actual captured footage is updated to reflect the new name in the Project window, greatly simplifying the organization of your footage files.

Note: If you rename captured clips, and then select the Make Offline option, the subsequent copied project retains and displays the original file name, not the new name.

Project Destination Designates where Project Manager saves the files you specified. Click Browse to navigate to a location other than the default. When creating a trimmed project, Project Manager creates a folder named "Trimmed_*[Project Name]*" and saves the trimmed project and other files you specified, such as trimmed footage files into the folder. When copying a project, Project Manager creates a folder named "Copied_*[Project Name]*" and copies the project, footage files, and other files you specified into the folder.

Note: If a folder already exists with a name identical to the project you are trimming, Project Manager appends a number to the name. For example, identically-named successive projects may have appendages of "_001, _002, _003, _004,...."

Disk Space Displays a comparison between the size of the current project's files and the estimated size of the trimmed or copied files. Click Calculate to update the estimate.

Clip Notes

The Adobe Premiere Pro Clip Notes feature streamlines a collaborative workflow by facilitating feedback from clients and colleagues. The Clip Notes feature exports a PDF (Portable Document Format) file that contains a rendered sequence—either as an embedded file or streamed from a server—that you can e-mail to any number of reviewers. A reviewer can open the PDF file, play the movie, and enter comments directly into the PDF file. Comments are automatically associated with timecode in the sequence. The reviewer then exports the comments and e-mails them back to you. When you import the comments into Adobe Premiere Pro, the reviewer's comments appear in the comments field of markers placed in the Timeline panel.

To review a PDF file generated by the Clip Notes feature, a reviewer must have Adobe Acrobat Standard, Acrobat Professional, or Adobe Reader (version 7.0 or later). Adobe Reader is available as a free download from the Adobe website.

For practice using Clip Notes, see the Clip Notes tutorial on the Total Training Video Workshop disk included with Adobe Premiere Pro.

Note: Avoid changing the sequence that is being reviewed until you have imported all Clip Notes comments related to it. If you edit the sequence after you export a Clip Notes PDF file, but before importing the completed comments, the comments will not appear at the proper points in the sequence.

To export a Clip Notes PDF

1 Select a sequence in the Timeline panel and choose Sequence > Export for Clip Notes.

2 In the Export Settings area, specify the following options:

Format Choose whether to create a QuickTime or Windows Media file.

Range Choose whether to export the entire sequence or only the frames under the work area bar.

Preset Specify a low, medium, or high quality preset.

3 Under PDF Settings, choose one of the following Video Options:

Embed Video Embeds the rendered sequence into the PDF file, typically for e-mail distribution to reviewers.

Stream Video Posts the rendered sequence to a network server with a link to the PDF file instead of embedding it in the PDF. You must upload the rendered sequence to a server either manually or by using the FTP options within Clip Notes. (You and your reviewers must have access to an FTP server that is also a web server.)

Note: Embedding the video results in a larger PDF file, but ensures that the reviewers will be able to view the file regardless of their access to a server. Streaming the video results in a smaller PDF file, but requires that the reviewer has access to the server you use to store the video.

4 Specify any of the following options:

PDF Password Requires the reviewer to enter a password to open the PDF file.

Instructions Add your specific instructions to reviewer to the generic ones provided in this field. These instructions appear when the reviewer opens the Clip Notes PDF file.

Return Comments To Specifies an e-mail address to which reviewers' comments will be returned when they export their comments. (See "To make Clip Notes comments" on page 401.)

5 If you chose Stream Video in step 3, specify the following options:

Streaming Settings Specifies the web URL where the video file (QuickTime or Windows Media) will be stored.

Confirm URL Later Allows you to specify or confirm a URL for the server later. Adobe Premiere Pro prompts you for a valid URL just prior to creating the Clip Notes PDF file.

FTP File To Server Select this option and specify settings to upload the rendered file to a server using FTP (file transfer protocol). You may need to consult your network administrator for the correct settings.

6 Click OK to export a PDF file for Clip Notes comments.

To make Clip Notes comments

1 Open a Clip Notes PDF document in Adobe Acrobat Standard, Acrobat Professional, or Adobe Reader (version 7.0 or later). If prompted, specify your preference in the Manage Trust for Multimedia Content dialog box.

2 If prompted for a password, enter the password and click OK. If prompted with an Instructions dialog box, read the instructions and click OK.

Note: You can reopen the instructions at any time by clicking the View Instructions button .

3 For Reviewer Name, enter your name. This will identify your comments and differentiate them from other reviewers' comments that the editor imports back into the sequence. (See "To import Clip Notes comments" on page 402.)

4 Use the playback controls to cue the video to the frame on which you want to comment and then do any of the following:

• Click the Add Comment button and type your comment.

• Click the Pause button and type your comment.

Clip Notes precedes your comment with the current review name and timecode automatically. You can add your own comment at the same frame as other reviewers.

5 Do any of the following:

• To cue to a comment by name, choose the comment in the Go To menu.

• To cue to the previous comment, click the Go To Previous Comment button .

• To cue to the next comment, click the Go To Next Comment button .

- To save your comments, click the Save Comment button 🖻 .

- To modify a comment, cue to the comment and then edit the text in the box.

- To delete a comment, cue to the comment and then click the Delete Comment button 🖻 .

6 When you are finished adding comments, click the Export button.

7 Specify the name and location of the file and then click Save. The file uses the .xfdf file extension.

8 If prompted by your e-mail client software (such as Microsoft Outlook), edit and send the e-mail that has your Clip Notes comments file attached. You are prompted by your e-mail client software if the editor specified an e-mail address in the Return Comments To option when creating the Clip Notes PDF file.

To import Clip Notes comments

Imported Clip Notes comments appear as sequence markers. If you import more than one Clip Notes PDF file, comments located in the same frame appear in a single marker, with each subsequent comment starting on a new line in the Marker dialog box.

1 Select a sequence in the Timeline panel and choose Sequence > Import Clip Notes Comments.

2 Select the file containing comments you want to import, and click Open. Each comment becomes a marker in the corresponding sequence's time ruler. Double-click a sequence marker to view its comments. (See "About markers" on page 140.)

Note: Clip Notes files use the .xfdf file extension.

Chapter 17: Creating DVDs

DVD creation overview

Creating DVDs

You can burn a sequence to DVD directly from Adobe Premiere Pro, or save encoded files to a folder or as an ISO image that you can burn later with other DVD-burning software. You can create auto-play DVDs or menu-based DVDs. Adobe Premiere Pro provides several DVD menu templates that you can use as designed, or customize them to create a DVD. Adobe Premiere Pro creates DVDs that conform to DVD-video format. It doesn't create data or audio DVDs.

If you are creating a DVD using Adobe Encore DVD, you can export a sequence as an AVI or MPEG-2. You can export a sequence containing sequence markers, which are recognized by Adobe Encore DVD as chapter points. (See "To add sequence marker comments, chapters, and links" on page 142.)

Note: Adobe Premiere Pro DVD markers are not recognized by Adobe Encore DVD.

Types of DVDs

In Adobe Premiere Pro, you can create auto-play DVDs with no menus, or menu-based DVDs that provide navigation options for your viewers.

Auto-play DVD Begins playing when the disc is inserted into a DVD player. Auto-play DVDs work best for short movies, or movies that you want to play continuously in a loop playback mode. Auto-play DVDs contain no menus. You can add DVD markers to auto-play DVDs that allow your viewers to skip forward or back through the movie using the Next and Previous buttons on a DVD player's remote control.

Menu-based DVD with scene selection submenu Displays a submenu of scenes that you specify with markers. These DVDs are best for long movies that play from start to finish, but that also contain scenes that the viewer might want to access from a submenu. On the main menu, the viewer can choose to play the movie or go to a scene selection submenu.

Menu-based DVD with movie selections   Divides a sequence into separate movies that viewers can access from the main menu. Using DVD main menu and stop markers, you can divide a sequence into individual movies. When you build the DVD, each movie corresponds to either the Play Movie or movie buttons on the main menu. You can also include scene markers that provide viewers with a scene selection submenu. The scene selection menu is for the entire sequence—you can't divide individual movies in your sequence into separate scene menus.

DVD creation workflow

Adobe Premiere Pro can burn a single sequence to DVD, but each sequence in your project can be burned to a separate DVD. Add all the content you want to include on DVD into a sequence. After you prepare the sequence, perform the following basic tasks:

1. Add scene, main menu, and stop markers.

Adobe Premiere Pro creates DVD menus dynamically based on DVD markers you place in the sequence. DVD markers are separate from sequence markers, but you apply them from the Timeline panel in a similar way. (See "About DVD markers" on page 405.)

If you are creating an auto-play DVD you can add scene markers so that the viewer can use a DVD player's remote control to move from scene to scene.

2. Choose a menu template.

Adobe Premiere Pro templates are predesigned menus that come in several styles. Buttons on the templates automatically link to DVD markers placed in the sequence. Adobe Premiere Pro creates additional submenus as necessary to accommodate all the DVD markers in a sequence. You choose a template from the DVD Layout panel. (See "To choose a DVD menu template" on page 410.)

Auto-play DVDs don't have menus, so you don't need to choose a template.

3. Customize the menu template.

Edit titles, change graphics, or add video for backgrounds. You can also use video in button thumbnails by specifying a section of a clip to play in the button. (See "To edit menu text and buttons" on page 411 and "To customize menu backgrounds" on page 412.)

4. Preview the DVD.

Check the functionality and the look of your DVD menus in the Preview DVD window. (See "To preview a menu-based DVD" on page 414.)

5. Burn the DVD.

Attach a write-capable DVD drive to your computer and burn your DVD content to disc. You can save the compressed files to a folder for playback from a computer hard drive. You can also save a DVD ISO image and distribute it or burn it later using other DVD-burning software. (See "To burn a DVD disc, or save to a DVD folder or ISO image" on page 415.)

Preparing content for DVD

DVD content is compressed according to DVD specifications so that it will play reliably on a wide range of players. When preparing content for a DVD project pay attention to frame size and frame rate, so that content retains its quality in the transition to DVD.

For best results, make sure that you capture or record following these specifications:

Frame size NTSC standard 720 x 480 or PAL standard 720 x 576. If your project uses a different frame size, Adobe Premiere Pro scales it automatically.

Frame rate 29.97 fps (NTSC) or 25 fps (PAL). All footage in a single project must be of the same frame rate.

Aspect ratio 4:3 or 16:9 (widescreen).

Audio bit depth 16 bits.

Audio sample rate 48 kHz.

DVD markers

About DVD markers

The type of DVD markers you add to a sequence depends on how you want your viewers to access the video. In general, use these guidelines:

- Use main menu markers (and stop markers) to divide the video into separate movies. Buttons on the main menu link to main menu markers.

- Use scene markers (without stop markers) when you want the movie to play from start to finish, and also want your viewer to be able to jump ahead to specific scenes. Scene buttons link to scene markers and appear on scene submenus one after another (not grouped by movie).

- Use stop markers to designate the end of a movie. When the DVD player reaches a stop marker, it returns back to the main menu. If you add a stop marker to a sequence, a DVD player will no longer play the movie from start to finish. Therefore, you generally add stop markers only if you've divided your video into separate movies, and don't need to play the clips in the sequence from beginning to end.

Note: You can use both main menu markers and scene markers in a movie. However, you must remember that once the DVD player encounters a stop marker, it returns to the main menu, not the menu from which it was called.
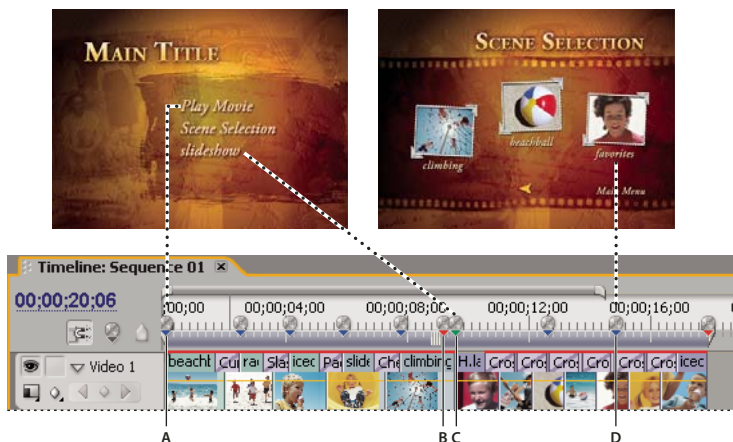
Relationship between DVD markers and the menu templates
A. Media start B. Stop marker C. Main menu marker D. Scene marker

Main menu markers

You can divide a sequence into individual movies that appear as buttons on the DVD main menu. You place main menu markers in the sequence to indicate the beginning of each movie and DVD stop markers to indicate the end of each movie. A button is added to the menu that corresponds to each main menu marker. Text in the marker's Name field becomes the button's text. If the main menu does not contain enough main menu marker buttons, Adobe Premiere Pro duplicates the main menu and adds a Next button on the primary main menu. If you have no main menu markers in your movie, no movie buttons appear on the main menu.

Note: The Play button on the main menu automatically links to the starting point of the time ruler, so you don't need to place a main menu marker there.

Duplicate menus are created when movie contains more main menu markers than buttons.
A. Next button leads to duplicate menu. B. Previous button returns user to main menu.

See also

"About DVD markers" on page 405

"To add a main menu marker or scene marker" on page 406

Scene markers

You can add DVD scene markers automatically or manually where desired. Adobe Premiere Pro uses scene markers to create a scene submenu, which is accessible from the Scene Selection button on the DVD main menu. If you have no scene markers in the sequence, Adobe Premiere Pro omits the Scenes button and the scenes submenu.
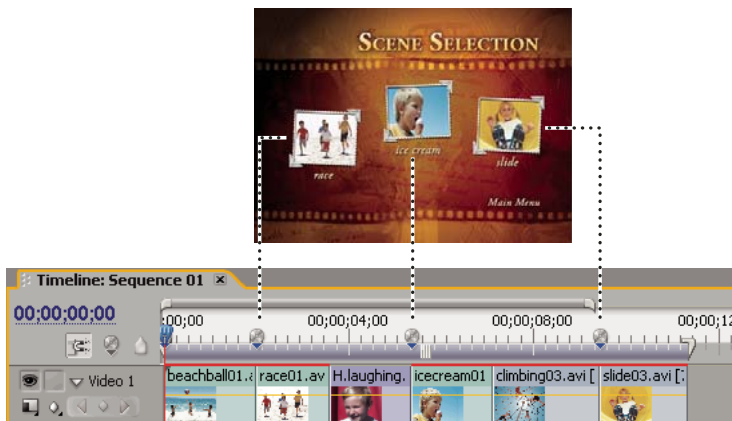
Scene markers map directly to buttons on Scenes submenu.

See also

"About DVD markers" on page 405

"To add a main menu marker or scene marker" on page 406

To add a main menu marker or scene marker

When you add markers manually, you can name them as you place them. The name you choose appears as the label for a button in the main menu or scenes menu.

On some templates, the menu buttons include thumbnail images of the video to which they are linked. By default, the thumbnail displays the frame visible at the position of the marker. However, the default frame does not necessarily represent the best frame for a button. In the DVD Marker dialog box, you can change the frame a thumbnail displays.

1 In the Timeline panel, move the current-time indicator to the location where you want to set the marker.

Note: The Play button on each main menu template automatically links to the start point of the time ruler. You needn't place a marker there unless you want it listed in the Scenes menu.

2 Click the Set DVD Marker button 🎬.

💡 *To quickly place a marker, you can drag a marker from the Set DVD Marker button to the desired location in the time ruler, or right-click in the time ruler and choose the type of marker you want to set at the current time.*

3 Type a name for the marker. Keep the name short so that it fits in the menu and doesn't overlap another button. (You can also adjust the name later, after you've selected the desired template.)

4 In the Marker Type menu, select the type of marker you want to set.

5 (Optional) Drag the Thumbnail Offset timecode as necessary to select the image you want displayed in the button thumbnail in the menu.

When you create the DVD, if you choose a menu with thumbnail images, the image you select will display in the menu. (This thumbnail is for the menu display only; the video linked to the button starts at the marker location.)
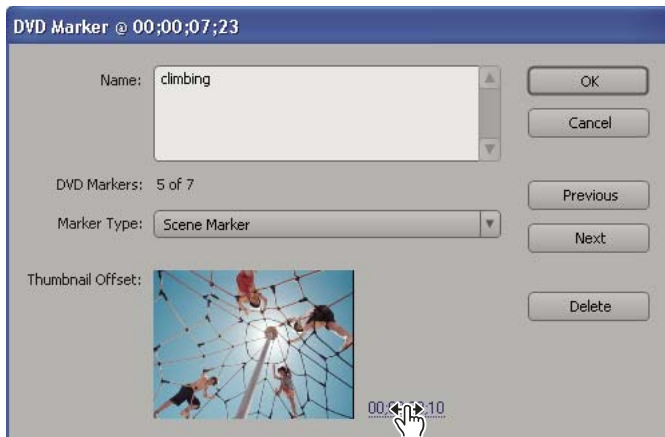
Dragging the Thumbnail Offset timecode

6 (Optional) To create motion buttons that play the video in the menu button, select Motion Menu Button.

7 Click OK. Adobe Premiere Pro adds the marker to the Timeline panel. A main menu marker is green; a scene marker is blue.

To add a stop marker

1 In the Timeline panel, move the current-time indicator to the end of the video or scene.

2 Click the Set DVD Marker button 🎬.

3 In the DVD Marker dialog box, select Stop Marker from the Marker Type menu and click OK.

See also

To automatically add scene markers to a sequence

You get the best results when automatically adding scene markers if each scene in your movie is a separate clip, and all the clips you want marked are on the Video 1 track. When your movie consists of multiple clips that overlay each other, you may prefer to place scene markers manually or place them at set intervals.

Automatically placed scene markers do not have names, so the buttons on the Scene submenu remain as named in the template. To customize the buttons, you can either name the markers after they are placed or rename the buttons after you select the template.

1 Click the Timeline panel to make it active.

2 Choose Marker > Auto-Generate DVD Markers.

3 In the Automatically Set DVD Scene Markers dialog box, select how you want the markers placed, entering a value if required:

At Each Scene Places a scene marker at each edit point (cut) between clips on the Video 1 track.

Every _ Minutes Places scene markers at the interval you specify. (This option is only available when the movie contains several minutes of footage.)

Total Markers Places the number of markers you specify evenly spaced across the entire range of clips in the Timeline panel.

4 If the sequence contains existing DVD markers that you no longer want, select Clear Existing DVD Markers.

5 Click OK.

If you do not like the placement of a DVD marker you can drag it in the time ruler to a different location. DVD markers are not tied to the video. If you later edit the video, you may need to move the markers or regenerate them so that they match the new edit points.

To move a DVD marker

❖ In the Timeline panel, drag the DVD marker you want to move to the desired location.

To edit a DVD marker name, type, or thumbnail

After you place a DVD marker, you can change its name, its type (scene, main menu, or stop), and the thumbnail image displayed in a thumbnail button on a menu. The marker names become the button names in the main menu or scenes submenu.

Note: After you select a template, you can also rename the buttons and change the thumbnails directly on the menu in the DVD Layout panel.

1 In the Timeline panel, double-click the DVD marker you want to edit.

2 In the DVD Marker dialog box, change any of the options. For information on setting marker and button options, see "To add a main menu marker or scene marker" on page 406.

To delete a DVD marker

You can delete individual DVD markers or clear all markers from the sequence at once. If you have edited a movie since you first selected DVD menu templates, you may find it is easier to delete all the markers at once, rather than drag them to new positions.

Note: If you have already selected a DVD template, deleting a DVD marker also deletes the button associated with the marker from the main menu or scenes submenu.

1 In the Timeline panel, position the current-time indicator over the DVD marker that you want to delete. You may need to zoom into the time ruler to better position the marker.

2 Choose Marker > Clear DVD Marker > DVD Marker At Current Time Indicator.

You can also delete a marker by double-clicking it in the Timeline panel. Then in the DVD Marker dialog box, click the Delete button.

3 To clear the sequence of all DVD markers, with the Timeline panel active, choose Marker > Clear DVD Marker > All DVD Markers.

Designing menu-based and autoplay DVDs

About menu-based DVDs

You create a menu-based DVD by using the predesigned menu templates included in Adobe Premiere Pro. Each template includes a main menu and scene selection submenu. The templates automatically link menu buttons with DVD markers you place in the Timeline panel.

In the templates, the main menus contain a minimum of two buttons: one to play the movie, the other to display a scene-selection submenu. The main menus in some templates also contain additional buttons designed to jump to other movies marked in the Timeline panel. The scene selection submenus generally contain buttons with both an identifying label and a thumbnail image from the scene. (The thumbnail on the menu displays a still image from the video.)

Main menu (left) and Scene Selection submenu (right)

You're not limited to the prebuilt appearance of a menu template. You can personalize it for your project by changing fonts, colors, backgrounds, and layout. But keep in mind that template changes apply only to the current sequence; you cannot save template changes in Adobe Premiere Pro for reuse.

To choose a DVD menu template

After you set the DVD markers, you are ready to select the DVD menu template. When choosing a template, don't worry if the menu doesn't have enough menu buttons to match each DVD marker in your movie. Adobe Premiere Pro creates additional menus as needed. When you select a template, the button text on the menus changes to the names you've given the DVD markers. If you added the markers automatically or haven't named the markers, you can name them after you select the template, as well as change the title of the menu. Without marker names, the buttons remain as named in the template.

You normally add DVD markers before you select a DVD template, but it isn't required. You can add, move, or delete DVD markers after choosing a template. Adobe Premiere Pro dynamically adjusts the DVD menus to match the markers, adding or deleting buttons as necessary.

Note: If the sequence does not contain any DVD markers, the first time you select a DVD menu template, Adobe Premiere Pro asks you if you want to add DVD scene markers automatically.

1 Choose Window > DVD Layout, and then choose the sequence name you want to burn to DVD.

2 In the DVD Layout panel, click Change Template.

3 Select Apply A Template For A DVD With Menus.

4 From the Theme menu, choose a theme that contains menu designs you like.

5 Scroll through the templates until you find the template that best matches the project.

6 Select the desired template, and Click OK. Adobe Premiere Pro links the buttons to the DVD markers in the sequence and inserts the DVD marker names for the button text.

7 If the sequence contains no DVD markers, you see a dialog box asking if you want to add scene markers automatically. (See "To automatically add scene markers to a sequence" on page 408.)

8 Click the small version of the menu in the bottom of the DVD Layout panel to view a menu. If necessary, use the scroll bar to scroll to the menu you want to view, or resize the window to view more side-by-side.

After you choose a template in the DVD Layout panel, you can customize the menu, preview the DVD, or burn the DVD.

See also

"To customize menu backgrounds" on page 412

"To edit menu text and buttons" on page 411

To change a DVD menu template

If you decide you do not like your choice of DVD menu, you can easily change to a different template. While you will lose any changes you made to the menu titles, changes you made to buttons that connect to DVD markers are not lost.

1 In the DVD Layout panel, click Change Template.

2 Choose a theme from the Theme menu.

3 Select the desired template, and click OK.

To view overlapping buttons

You can make sure that buttons on a DVD menu don't overlap if the button text is too long.

❖ Choose Show Overlapping Menu Buttons from the DVD Layout panel menu. Overlapping buttons are outlined in red.

To edit menu text and buttons

After you select the DVD template, you can change menu text or the appearance of any of the main menu or scene buttons. You can also delete any button. Because the buttons are tied directly to the DVD markers, deleting a button deletes the marker that generated it.

1 At the bottom of the DVD Layout panel, click the small version of the menu you want to change.

2 In the DVD Layout panel, double-click the text or button you want to change.

3 To edit text or buttons not connected to markers, double-click the menu title or button and edit the text in the Change Text dialog box. To use multiple lines, press Enter for each new line. Click OK.

4 To edit buttons connected to DVD markers, do any of the following in the DVD Marker dialog box, and then click OK:

- To rename the marker (and the button in the menu), type a new name and click OK. To use multiple lines, press Enter for each new line. Keep the name short so that it fits in the menu and doesn't overlap another button.

- To select the image you want displayed in the button thumbnail in the menu, drag the Thumbnail Offset timecode as necessary, and click OK. (This thumbnail is for the menu display only; the video linked to the button starts at the marker location.)

- To delete a button, click Delete. Adobe Premiere Pro deletes the marker from the Timeline panel and deletes the button from the DVD menu. Alternatively, you can select the button's marker in the Timeline panel, and press the Delete key.

See also

To move and resize menu items

1 At the bottom of the DVD Layout panel, click the small version of the menu you want to change. A larger version of the menu appears in the panel.

2 Do any of the following:

- To resize a menu item, select it in the DVD Layout panel. A rectangular *bounding box* with eight selection points appears around the item. Drag any selection point on the bounding box to resize the item.

- To move a menu item, select the item and drag it.

To specify text settings

You can change text properties for menu titles and buttons, including font, size, style, and color.

1 At the bottom of the DVD Layout panel, click the small version of the menu you want to change. A larger version of the menu appears in the panel.

2 Click to select a menu title or button text.

3 Do any of the following in the Effect Controls panel:

• To change the font, choose one from the Font menu. (You may have to select the triangle next to Text to see the text attribute options.)

• To set a text style, choose an option from the Font Style menu, or click the Bold, Italic, or Underline icons. You can click more than one icon.

• To change the text size, choose an option from the Text Size menu.

• To change the text color, click the Text Color button and choose a color from the Color Picker.

4 To apply the text settings to similar text items in all menus, click Apply To All Scene Buttons, Apply To All Text Buttons, or Apply To All Marker Buttons. The button available depends on the type of text item you are changing.

To animate buttons

You can add video to Main Menu and Scene buttons if the template contains buttons that display a thumbnail.

1 At the bottom of the DVD Layout panel, click the small version of the menu you want to change. A larger version of the menu appears in the panel.

2 Select a button in the DVD Layout panel.

3 In the Effect Controls panel, select Motion Menu Button.

4 Set the In point where you want the clip to start playing when the menu is displayed. You can either use the Play/Stop button to view the clip in the thumbnail, or edit the In Point timecode field.

5 To set the duration for the clip to play, click the background of the menu, and then, in the Effect Controls panel under Motion Menu Buttons, edit the Duration timecode field.

Note: The duration you set for a motion menu button applies to all motion menu buttons on the DVD. The maximum duration is 30 seconds.

To customize menu backgrounds

You can personalize the menu background with either a video clip, a video clip with audio, an audio clip, or a still image.

1 At the bottom of the DVD Layout panel, click the small version of the menu you want to change. A larger version of the menu appears in the panel.

2 Drag the clip (video or audio) or still image from the Project panel to the drop zone in the Effect Controls panel. Alternatively, you can click Browse to locate a clip on your hard drive, or select a clip in the Timeline panel. If the clip contains both video and audio, you can drag it to either drop zone.
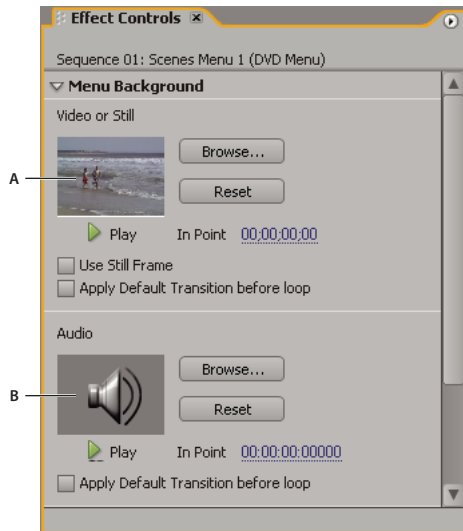
Menu background options
A. *Video drop zone* **B.** *Audio drop zone*

Note: *When both video and audio are set and you replace one of the clips, the other clip remains set.*

3 Specify settings in the Effect Controls panel:

Reset Sets the background to the original template background.

Play Plays media in the thumbnail. The icon changes from the Play button ▶ to the Pause button ■ . Click the Pause button to stop the playback and set the In point (start) of the background.

In Point Sets the In point of the video or audio clip. Drag the timecode to the desired frame.

Use Still Image Sets the current frame in the video clip as a still background image. Drag the timecode to set the frame.

Apply Default Transition Before Loop Adds the transition you've set as the default each time the video starts from the beginning. (See "Default transitions" on page 166.)

Duration Sets the duration of background video or audio from the In points. The maximum duration is 30 seconds.

Apply To All Menus Applies the background to all DVD menus.

Duration (Motion Menu Buttons) Sets the duration of video played in motion menu buttons for the entire DVD. This option appears only when the menu buttons also have video. (See "To animate buttons" on page 412.)

To create an auto-play DVD

An auto-play DVD contains no menus. Instead, it plays automatically when you insert the disc into a DVD player. Although it has no menus, you can set DVD markers so that the Next and Previous buttons on the DVD player's remote control jump to specific points in the movie. An auto-play DVD does not distinguish between main menu markers and scene markers, so you can add either for use by the Next and Previous buttons. Auto-play DVDs ignore stop markers.

1 Choose Window > DVD Layout, and then choose the sequence name you want to burn to a DVD.

2 In the DVD Layout panel, click Change Template.

3 Select Auto-play DVD With No Menus, and click OK.

4 To preview the DVD and test the markers, click Preview DVD in the DVD Layout panel. Use the Play button, Previous Scene, and Next Scene buttons to simulate a DVD player's remote control. (See "To preview a menu-based DVD" on page 414.)

5 Click Burn DVD. (See "To burn a DVD disc, or save to a DVD folder or ISO image" on page 415.)

💡 *You can switch between auto-play and menu-based DVDs by clicking Change Template in the DVD Layout panel and choosing the appropriate option.*

See also

"To add a main menu marker or scene marker" on page 406

Previewing and burning DVDs

To preview a menu-based DVD

It is a good idea to preview a DVD before you burn it. The Preview DVD window contains controls that mimic those on a DVD player's remote control. By using these controls, you can test each button on the menus and view the video to which they link.
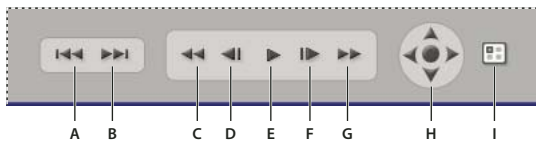
Preview DVD navigation controls
A. Previous Scene B. Next Scene C. Rewind D. Skip back a frame E. Play/Pause F. Skip forward a frame G. Fast forward H. Button navigation arrows and Enter button I. Return to main menu

1 In the DVD Layout panel, click Preview DVD. You see the main menu of the DVD in the Preview DVD dialog box.

Note: If you see a warning that buttons overlap, see "To view overlapping buttons" on page 411.

2 Use the navigation controls in the Preview to select each button and view each scene or video.

Supported DVD media

Adobe Premiere Pro supports single-layer, 4.7 GB discs of the following types:

- DVD+R

- DVD+RW

- DVD-R

- DVD-RW

Note: If you have a dual-layer recordable DVD drive, you must use single-layer DVD+R or DVD+RW discs.

Choose the media supported by both your DVD burner and the DVD player on which you plan to play the DVD. Unfortunately, not all DVD burners and DVD players support all types of DVDs. For example, many TV DVD players recognize DVD+R discs, but not all. DVD-R is compatible with more players.

If your DVD burner is not compatible with Adobe Premiere Pro, you can burn the project to a folder, which allows you to use the software included with the burner to burn the final DVD. (See "To burn a DVD disc, or save to a DVD folder or ISO image" on page 415.)

Creating DVDs for different regions

If you are sharing your DVD with someone from a different country, you may need to burn the DVD using a different television standard. In most of the world, DV devices (from camcorders to TV monitors) conform to one of two television standards: NTSC or PAL. The standard varies depending on the region. Most DVD players can play only DVDs that match their television standard. The television standard in Japan and North America is NTSC, while most of Europe and the Middle East uses the PAL standard.

Adobe Premiere Pro can create both NTSC and PAL DVDs. While you get the best results when the project settings, the video, and the DVD you burn all conform to the same television standard, you can easily convert a project when you burn the DVD. In this way, you can create DVDs appropriate for your region as well as for other parts of the world.

To burn a DVD disc, or save to a DVD folder or ISO image

After you preview the DVD and are satisfied that it is complete, you are ready to burn the project to a DVD disc. Make sure that the DVD disc you've selected is compatible with both your DVD burner and with the DVD player in which you plan to play the DVD. Also, be aware that you must have enough available hard disk space to accommodate the complete compressed DVD files, as well as any scratch files created during export.

The DVD-video format requires MPEG2 compression. Depending on the complexity and length of the project and your computer, compressing video and audio for a DVD can take hours. If you plan to burn several DVDs, you can save time by burning them in the same session. In this way, you compress the project only once.

Note: If your DVD burner isn't compatible, you can burn the project to an ISO image or a folder instead. Then, using the software utility included with the DVD burner, you can burn the final DVD.

1 In the DVD Layout panel, click Burn DVD.

You can also access the Burn DVD dialog box by clicking the Timeline panel to make it active, and then choosing File > Export > Export To DVD.

2 In the Burn DVD dialog box, set options:

Burn To Disc Burns the menus and sequence to a blank DVD disc.

Burn To Folder Encodes the files and saves them in a specified folder. You can play the DVD content from a computer hard disk using DVD player software.

Burn To ISO Image Encodes to an ISO image and saves the file in the specified location.

Disc Name, Folder Name, File Name Specifies a name for the DVD disc, the folder for encoded files, or the name of the ISO file. (The default disc name is a date stamp in the format: YYYYMMDD_hhmmss, where YYYY is year, MM is month, DD is day, hh is hour, mm is minutes, and ss is seconds.)

Burner Location Specifies the DVD drive to use when multiple drives are available. Click Rescan to refresh the list of available drives. Make sure that a compatible blank DVD disc is inserted in the drive. If you insert a disc, click Rescan to recheck all connected DVD burners for valid media.

Note: Adobe Premiere Pro detects only DVD drives that are connected and turned on at the time you started Adobe Premiere Pro. If you connected and turned on any DVD-burning drive after that point, they are not recognized until you restart.

Folder Location, File Location Specifies the folder or file location if burning to a folder or ISO file. Click Browse to navigate to a new location.

Status Displays the status of the DVD drive and whether the disc has sufficient space to burn your sequence. You may need to reduce your quality setting.

Copies Specifies the number of copies of a DVD to burn. As each disc is completed, Adobe Premiere Pro asks you to insert another disc until all of the discs you specified have been burned.

Export Range Specifies the portion of the sequence to burn, either the entire sequence or the portion defined by the work area bar. This option is available for autoplay DVDs only.

Loop Playback Plays the video from start to end, and then plays the video again. This option is available for autoplay DVDs only.

3 In the Export settings dialog box, choose an option from the Preset menu (under Export settings). These options affect the TV standard (NTSC or PAL) and the quality of your DVD. Click OK.

Note: The default export options are chosen based on your project settings.

4 In the DVD Burn dialog box, click Burn to convert your project to the DVD format and burn the DVD, or save it to a folder or ISO file. If you chose the Burn Disc option and no DVD burner is connected, the Burn button is unavailable.

Note: Compressing the video and audio for DVD output can take several hours.

See also

"Adobe Media Encoder Video options" on page 390

"Adobe Media Encoder Audio options" on page 392

Chapter 18: Keyboard shortcuts

Finding and customizing keyboard shortcuts

About keyboard shortcuts

Adobe Premiere Pro provides a set of keyboard shortcuts. Because many commands and buttons have keyboard equivalents, you can edit a video program with minimal use of the mouse. You can also create or edit keyboard shortcuts by using the Keyboard Customization command. In the Keyboard Customization dialog box, the default shortcut set is called Adobe Premiere Pro Factory Defaults.

You can find the keyboard shortcuts for a tool, button, or menu command by doing any of the following:

- For a tool or button, hold the pointer over the tool or button until its tool tip appears. If available, the keyboard shortcut appears in the tool tip after the tool description.

- For menu commands, look for the keyboard shortcut at the right of the command.

- For keyboard shortcuts not shown in tool tips or on menus, see the Shortcut tables in this chapter, or choose Edit > Keyboard Customization. The Keyboard Customization dialog box is also a good place to look if you suspect that shortcuts might have been changed (customized) by a user.

To customize keyboard shortcuts

In addition to using the standard set of keyboard shortcuts, you can assign your own custom shortcuts to nearly any menu command, button, or tool. By customizing shortcuts, you can assign shortcuts to commands that don't currently have shortcuts, reassign shortcuts from commands you rarely use to commands you use often, or set shortcuts to match other software you use. If other sets are available, you can choose them from the Set pop-up menu in the Keyboard Customization dialog box. You can save different sets of shortcuts and restore the default settings.

1 Choose Edit > Keyboard Customization.

2 (Optional) From the Set pop-up menu in the Keyboard Customization dialog box, choose the set of keyboard shortcuts you want to use in Adobe Premiere Pro:

Adobe Premiere Pro Factory Defaults Loads the keyboard shortcuts used in Adobe Premiere Pro. This is the default set.

Shortcuts for Avid Xpress DV 3.5 Loads keyboard shortcuts that are the same as in Avid Xpress DV 3.5. This provides a convenience for users who transition from Avid to Adobe Premiere Pro.

Shortcuts for Final Curt Pro 4.0 Loads keyboard shortcuts that are the same as in Final Cut Pro 4.0. This provides a convenience for users who transition from Final Cut Pro to Adobe Premiere Pro.

3 In the Keyboard Customization dialog box, choose an option from the pop-up menu:

Application Displays commands found in the menu bar, organized by category.

Windows Displays commands associated with panels and pop-up menus.

Tools Displays a list of tool icons.

4 In the Command column, view the command for which you want to create or change a shortcut. If necessary, click the triangle next to the name of a category to reveal the commands it includes.

5 Click in the item's shortcut field to select it.

6 Type the shortcut you want to use for the item. If the shortcut is already in use, you are asked to either replace the existing shortcut or cancel.

7 To erase a shortcut so you can enter a different one, click Undo. Click Redo to restore the previously entered shortcut.

8 Repeat the procedure to enter as many shortcuts as you want. When you're finished, click Save As, type a name for your Key Set, and click Save.
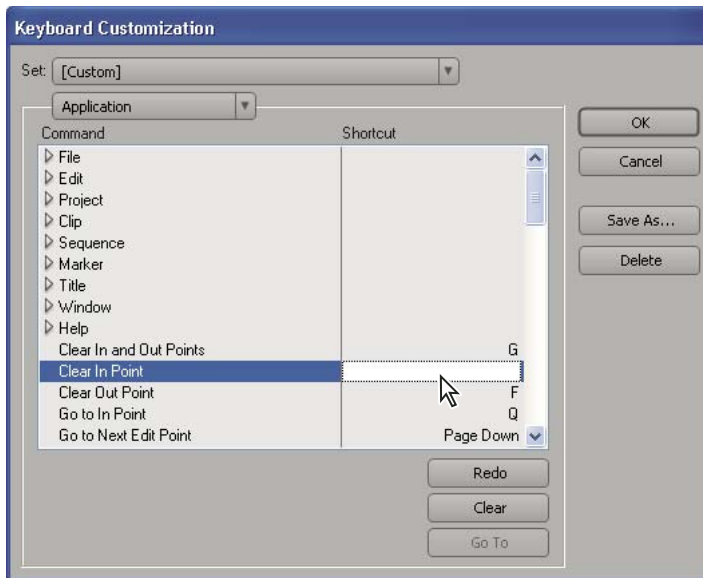
Selecting a shortcut

Note: Some commands are reserved by the operating system and cannot be reassigned to Adobe Premiere Pro. Also, you cannot assign the plus (+) and minus (–) keys on the numeric keypad because they are necessary for entering relative timecode values. You can assign the plus (+) and minus (–) keys on the keyboard, however.

To remove shortcuts

1 Choose Edit > Keyboard Customization.

2 Do one of the following:

• To remove a shortcut, select the shortcut you want to remove, and click Clear.

• To remove a set of shortcuts, choose the key set from the Set pop-up menu and click Delete. When prompted in the warning dialog box, click Delete to confirm your choice.

To switch to a different set of shortcuts

1 Choose Edit > Keyboard Customization.

2 Choose the set of shortcuts you want to use from the Set pop-up menu.

Default keyboard shortcuts

Keys for selecting tools

Result	Shortcut
Selection tool	V
Track Select tool	M
Ripple Edit tool	B
Rolling Edit tool	N
Rate Stretch tool	X
Razor tool	C
Slip tool	Y
Slide tool	U
Pen tool	P
Hand tool	H
Zoom tool	Z

Keys for viewing panels

Result	Shortcut
User Workspace 0	Shift + F5
User Workspace 1	Shift + F6
User Workspace 2	Shift + F7
User Workspace 3	Shift + F8

Keys for the Capture panel

You can find most keyboard shortcuts in menu commands and tool tips. Additional shortcuts appear in the table below.

Result	Shortcut
Navigate through editable fields	Tab
Cancel capture	Esc
Eject	E
Fast Forward	F
Go to In point	Q
Go to Out point	W
Record	G
Rewind	R

Result	Shortcut
Step back	Left Arrow
Step forward	Right Arrow
Stop	S

Keys for the DVD Layout

You can find most keyboard shortcuts in menu commands and tool tips. Additional shortcuts appear in the table below.

Result	Shortcut
Decrement	-
Increment	=
Move down	Down Arrow
Move left	Left Arrow
Move right	Right Arrow
Move up	Up Arrow

Keys for the Multi-Camera Monitor

You can find most keyboard shortcuts in menu commands and tool tips. Additional shortcuts appear in the table below.

Result	Shortcut
Go to next edit point	Page Down
Go to previous edit point	Page Up
Play/Stop	Spacebar
Record On/Off	0
Select Camera 1	1
Select Camera 2	2
Select Camera 3	3
Select Camera 4	4
Step back	Left Arrow
Step forward	Right Arrow

Keys for the Project panel

You can find most keyboard shortcuts in menu commands and tool tips. Additional shortcuts appear in the table below.

Result	Shortcut
Delete selection with options	Ctrl + Delete
Extend selection down	Shift + Down Arrow
Extend selection left	Shift + Left Arrow
Extend selection right	Shift + Right Arrow
Extend selection up	Shift + Up Arrow
Move selection down	Down Arrow
Move selection to the end	End
Move selection to home	Home
Move selection left	Left Arrow
Move selection a page down	Page Down
Move selection a page up	Page Up
Move selection right	Right Arrow
Move selection up	Up Arrow
Next thumbnail size	Shift +]
Previous thumbnail size	Shift + [
Toggle view	Shift + \

Keys for the Source Monitor

You can find most keyboard shortcuts in menu commands and tool tips. Additional shortcuts appear in the table below.

Result	Shortcut
Close source clip	Ctrl + Backspace
Close all source clips	Ctrl + Shift + Backspace

Keys for the Timeline

You can find most keyboard shortcuts in menu commands and tool tips. Additional shortcuts appear in the table below.

Result	Shortcut
Set work area bar to sequence	Double-click the work area bar
Set work area bar In point	Alt + [
Set work area bar Out point	Alt +]
Clear In and Out points	G
Clear In point	D
Clear selection	Backspace

Result	Shortcut
Clear Out Point	F
Edit audio or video In point or Out point independently	Alt-drag In point or Out point
Go to In point	Q
Go to Out point	W
Go to next edit point	Page Down
Go to previous edit point	Page Up
Go to sequence/clip end	End
Go to sequence/clip start	Home
Match frame	T
Move selected clip forward a specified number of frames	Type +, followed by the number of frames, and then press Enter
Move selected clip back a specified number of frames	Type-, followed by the number of frames, and then press Enter
Nudge clip selection 5 frames to the left	Alt + Shift + ,
Nudge clip selection one frame to the left	Alt + ,
Nudge clip selection 5 frames to the right	Alt + Shift + .
Nudge clip selection one frame to the right	Alt + .
Play from current-time indicator to Out point	Alt + spacebar
Play In to Out with preroll/postroll	Ctrl + Alt + spacebar
Toggle Play/Stop	spacebar
Play forward one frame at a time	Hold K while pressing L
Play in reverse one frame at a time	Hold K while pressing J
Play forward slowly (8 fps)	Hold down K + L
Play in reverse slowly (8 fps)	Hold down K + J
Reveal nested sequence	Shift + T
Ripple delete	Alt + Backspace
Set In point	I
Set next available numbered Timeline marker	Shift + * (use the numeric keypad)
Set Out point	O
Set unnumbered marker	* (use the numeric keypad)
Show next screen	Down Arrow
Show previous screen	Up Arrow
Shuttle left	J
Shuttle right	L

Result	Shortcut
Shuttle slow left	Shift + J
Shuttle slow right	Shift + L
Shuttle stop	K
Slide clip selection 5 frames to the left	Alt + Shift + Left Arrow
Slide clip selection one frame to the left	Alt + Left Arrow
Slide clip selection 5 frames to the right	Alt + Shift + Right Arrow
Slide clip selection one frame to the right	Alt + Right Arrow
Slip audio or video independently	Alt-drag the audio or video portion of the clip with the Selection tool
Slip clip selection 5 frames to the left	Ctrl + Alt + Shift + Left Arrow
Slip clip selection one frame to the left	Ctrl + Alt + Left Arrow
Slip clip selection 5 frames to the right	Ctrl + Alt + Shift + Right Arrow
Slip clip selection one frame to the right	Ctrl + Alt + Right Arrow
Step back	Left Arrow
Step back 5 frames/units	Shift + Left Arrow
Step forward	Right Arrow
Step forward 5 frames/units	Shift + Right Arrow
Target audio track above	Ctrl + Shift + =
Target audio track below	Ctrl + Shift + -
Target video track above	Ctrl + =
Target video track below	Ctrl + -
Trim	T
Zoom to sequence	\

Keys for the Titler

Result	Shortcut
Arc tool	A
Decrease kerning by 5 units	Alt + Shift + Left Arrow
Decrease kerning by 1 unit	Alt + Left Arrow
Decrease leading by 5 units	Alt + Shift + Down Arrow
Decrease leading by 1 unit	Alt + Down Arrow
Decrease text size by 5 points	Ctrl + Alt + Shift + Left Arrow
Decrease text size by 1 point	Ctrl + Alt + Left Arrow
Ellipse tool	E

Result	Shortcut
Increase kerning by 5 units	Alt + Shift + Right Arrow
Increase kerning by 1 unit	Alt + Right Arrow
Increase leading by 5 units	Alt + Shift + Up Arrow
Increase leading by 1 unit	Alt + Up Arrow
Increase text size by 5 points	Ctrl + Alt + Shift + Right Arrow
Increase text size by 1 point	Ctrl + Alt + Right Arrow
Insert copyright symbol	Ctrl + Alt + Shift + C
Insert registered symbol	Ctrl + Alt + Shift + R
Line tool	L
Nudge selected object 5 pixels down	Shift + Down Arrow
Nudge selected object 1 pixel down	Down Arrow
Nudge selected object 5 pixels to the left	Shift + Left Arrow
Nudge selected object 1 pixel to the left	Left Arrow
Nudge selected object 5 pixels to the right	Shift + Right Arrow
Nudge selected object 1 pixel to the right	Right Arrow
Nudge selected object 5 pixels up	Shift + Up Arrow
Nudge selected object 1 pixel up	Up Arrow
Pen tool	P
Position objects to the bottom Title Safe Margin	Ctrl + Shift + D
Position objects to the left Title Safe Margin	Ctrl + Shift + F
Position objects to the top Title Safe Margin	Ctrl + Shift + O
Rectangle tool	R
Rotation tool	O
Selection tool	V
Send frame to external monitor	Ctrl + E
Type tool	T
Vertical Type tool	C
Wedge tool	W

Keys for the Trim panel

You can find most keyboard shortcuts in menu commands and tool tips. Additional shortcuts appear in the table below.

Result	Shortcut
Focus on both Outgoing and Incoming sides	Alt + 1
Focus on Incoming side	Alt + 3
Focus on Outgoing side	Alt + 2
Trim backward by large trim offset	Alt + Shift + Left Arrow
Trim backward by one frame	Alt + Left Arrow
Trim forward by large trim offset	Alt + Shift + Right Arrow
Trim forward by one frame	Alt + Right Arrow

Keys for Adobe Bridge

This is not a complete list of keyboard shortcuts. This table lists only those shortcuts that are not displayed in menu commands or tool tips.

Result	Shortcut
Open Adobe Bridge from other Creative Suite application	Control + Alt + O, Control + Shift + O
Switch to previous Bridge window	Shift + Control + ~
Switches to the next view (As Thumbnails. As Filmstrip, As Details, or As Versions And Alternates)	Control + \
Switch to user-defined workspaces	Control + F6 through Control + F12
Switch to previous view	Shift + Control + \
Show all files	Alt + Control + A
Show files with 1 or more stars	Alt + Control + 1
Show files with 2 or more stars	Alt + Control + 2
Show files with 3 or more stars	Alt + Control + 3
Show files with 4 or more stars	Alt+Control+4
Show files with 5 stars	Alt + Control + 5
Show files with label 1 (red)	Alt + Control + 6
Show files with label 2 (yellow)	Alt + Control + 7
Show files with label 3 (green)	Alt + Control + 8
Show files with label 4 (blue)	Alt + Control + 9
Return to last application that launched Bridge	Alt + Control + O
Move up a folder (in folder view) or a row	Up Arrow
Move down a folder (in folder view) or a row	Down Arrow
Move up a level (in folder view)	Control + Up Arrow
Move left one item	Left Arrow

Result	Shortcut
Move right one item	Right Arrow
Move to the first item	Home
Move to the last item	End
Add to selection (discontiguous)	Control-click
Refresh tree and thumbnail panes	F5
Add an item to the selection	Shift + Right Arrow, Left Arrow, Up Arrow, or Down Arrow
Rotate image clockwise	Control +]
Rotate image counterclockwise	Control + [
Launch File Bridge in maximized state and auto-hide palettes	Control-click the Open Bridge icon in the options bar
Open File Info dialog box	Control + Alt + Shift + I
Display Help	F1

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